



# Transportation 2040

Plan as adopted by Vancouver City Council on October 31, 2012





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## **A. SETTING THE STAGE**

## OVERVIEW

A transportation vision for the City of Vancouver:

*By 2040, we envision a city with a smart and efficient transportation system that supports a thriving economy while increasing affordability; healthy citizens who are mobile in a safe, accessible, and vibrant city; and a city that enhances its natural environment to ensure a healthy future for its citizens and the planet.*

**Transportation 2040** is a long-term strategic vision for the city that will help guide transportation and land use decisions and public investments for the years ahead. It provides a blueprint for us to move forward, build upon our past successes, and rise to meet new and emerging challenges.

The plan sets long-term targets and includes both high-level policies and specific actions to achieve this vision. Many of the goals, targets, and policies are shared by the Greenest City 2020 Action Plan, which is a wide-ranging strategy to make Vancouver the greenest city in the world based on 10 goal areas, of which green transportation is one. The process to develop the Greenest City 2020 Action Plan set the stage for consultation on, and development of, Transportation 2040. The plan supports not only Greenest City, but other City, regional, and provincial policies as well.

*Section A: Setting the Stage* provides some background and context to the plan, describing plan development, partnerships, relevant policy, and the transportation challenges we face as we plan for the future. This sets the stage for *Section B: Directions*, the core of this plan, which provides policy direction and actions. *Section C: Delivering the Plan* describes some current areas of focus for transportation planning in the city that embody the directions provided by this plan and put concepts into action.

## CONSULTATION AND PLAN DEVELOPMENT

The directions contained in this plan are based upon best practices from around the world as well as local expertise and public input. Key inputs include:

- Broad **public consultation** in 2011 focused on ideas generation, with over 8,000 people participating at events including town hall meetings, artist-facilitated co-design workshops, surveys, and online discussion boards
- Detailed **public review** of draft directions in 2012, with over 10,000 people participating at public events, open houses, and festivals, as well as through social media and 944 responses to an online questionnaire
- Ongoing **engagement** with over 50 stakeholder groups, including representatives from other government agencies, emergency services, health care and social service providers, industry leaders, non-profit organizations, and local business groups
- A **peer review** by leading transportation experts from around the world
- Approved high-level direction and detailed ideas generated through the **Greenest City** planning process, which were the result of extensive public engagement in 2010

## CITY'S ROLE

The City has a number of ways in which we can influence travel behaviour and effect change in transportation. Transportation is complex, as issues often extend beyond municipal or even regional boundaries, and many players are involved through overlapping jurisdictions. Some things are largely within the City's control, like our public rights-of-way, street infrastructure, land use, and much of the built environment. Other things fall under regional, provincial, or federal jurisdiction—like transit, ports, and regional infrastructure planning. In this latter case, the City is a partner, stakeholder, and advocate for local transportation issues.

The City's role in transportation includes:

- Building and maintaining City-owned public rights-of-way and infrastructure, including **streets, sidewalks, and public spaces**
- Guiding development on private property through **land use and urban design** policies and guidelines
- Managing how our streets are used through **rules, regulations, and pricing**
- **Advocating and partnering** with outside agencies on things beyond our jurisdiction
- **Educating and empowering** citizens to make sustainable transportation choices
- Providing **leadership**, both locally and around the world

## PARTNERSHIPS

A successful plan is only possible by working with others. Partnerships are critical to achieving success, particularly in a region with 21 other municipalities, regional transportation and planning agencies, and many overlapping jurisdictions and interests.

Major partners include:

- TransLink, the regional transportation agency
- The Province of British Columbia
- Metro Vancouver and neighbouring municipalities
- Vancouver Coastal Health and other health care agencies and providers
- Schools and academic institutions
- Port Metro Vancouver, a federal authority
- Vancouver International Airport, a federal authority
- Rail companies
- ICBC, the provincial auto insurance provider
- Trucking, taxi, and commercial transit providers
- Transportation non-profit organizations
- Local business and community associations
- Enforcement and emergency service providers

Many organizations, such as TransLink and the provincial government, have set their own transportation targets and developed strategies to address them. Coordination is important, and the City is working to ensure consistency with the 2045 regional transportation strategy TransLink is currently developing, as well as with past plans and strategies such as the Provincial Transit Plan.

The City has also been coordinating with other municipalities within the region, both directly and through TransLink's Major Roads and Transportation Advisory Committee. Its regular meetings explore regional transportation issues within and between Metro Vancouver's municipalities.

## PLANNING CONTEXT

The City and its partners have been working together on transportation issues through a number of related plans.

### Regional and Provincial Governments

TransLink sets regional priorities for transportation and Metro Vancouver for land use planning. In 2008, the provincial government outlined its support for regional transit investment, including the UBC Line.

- Metro Vancouver: Regional Growth Strategy (2011)
- TransLink: Transport 2040 (2008) and Transport 2045 (in development)
- British Columbia: Provincial Transit Plan (2008) and Climate Action Plan (2008)

### Neighbouring Municipalities

Vancouver's neighbours have transportation plans that speak to increasing travel by foot, bicycle, and transit, though they vary in focus, approach, and scale. Vancouver's transportation network connects to the north and south via five road bridges (managed by various agencies) and dedicated rail and ferry links. Numerous streets connect to the east and west.

- District of North Vancouver: Transportation Plan (2012)
- District of West Vancouver: Strategic Transportation Plan (2010)
- City of North Vancouver: Long-Term Transportation Plan (2008)
- University Endowment Lands: Official Community Plan (2005)
- Burnaby: Transportation Plan (2004)
- Richmond: Official Community Plan – Transportation (1999, update in 2012)

### Institutional Partners

Both Port Metro Vancouver and the Vancouver International Airport are planning to increase their freight and passenger capacity. The University of British Columbia's Point Grey Campus relies on direct and reliable transit connections.

- Port Metro Vancouver: Port 2050 (2010)
- Vancouver International Airport: Your Airport 2027 (2007)
- University of British Columbia: Strategic Transportation Plan (2005, renewal ongoing)

### Previous City of Vancouver Transportation Plans

Transportation 2040 succeeds Vancouver's 1997 Transportation Plan, which recognized that the city's future did not lay in road expansion. Other transportation related plans supplement this work.

- Downtown Transportation Plan (2002)
- Bicycle Plan (1999)
- Transportation Plan (1997)
- Greenways Plan (1995)

### Other City Plans and Initiatives

Transportation 2040 builds upon the Greenest City process and supports goals from other strategic planning documents.

#### Completed

- Mayor's Task Force on Housing Affordability (2012)
- Greenest City Action Plan (2011)
- Housing and Homelessness Strategy (2011)
- Vancouver Economic Action Strategy (2011)
- Cambie Corridor Plan (2011)
- Central Waterfront Hub Framework (2009)
- Metro Core Jobs and Economy Land Use Plan (2007)
- CityPlan (1993) and community plans (various years)

#### In Progress

- Broadway Corridor Land Use Vision
- Community Plans
- Healthy City Strategy
- Tourism Vancouver Master Plan

## RISING TO THE CHALLENGES

Our world is constantly changing. Vancouver faces a number of challenges—some old, some new, some global in nature, and others unique to our region. With commitment and creativity we can face our transportation future head-on by supporting our economy, protecting the environment, and improving quality of life for everyone.

### A Growing City with Limited Road Space

The city is growing. Over the next 30 years, we're expecting about 130,000 new residents and close to 90,000 new jobs, bringing more trips and more life to the city. The street network is largely built out, leaving few opportunities for building new roads, but by using our existing streets more efficiently we can move more people in the limited space we have.

### Demand for Transit

Vancouver has one of the busiest transit systems in North America. Unlike in most cities, transit demand far exceeds capacity, but ongoing funding challenges have limited service improvements. If stable, long-term funding can be found, strategic investments will increase transit capacity, helping us meet existing and future demand, and enabling us to reach City, regional, and provincial transportation targets.

### Costs of Sedentary Lifestyles

The financial burden of physical inactivity is substantial, costing the provincial health care system more than \$570 million in 2005. About 45% of British Columbians are overweight or obese, and the rate of obesity in BC children has nearly tripled in the past 25 years. We can help reverse this trend by making active transportation choices like walking and cycling more convenient and comfortable, so that physical activity becomes part of the daily rhythm of life.

### High Cost of Housing

Vancouver is an expensive city and the high cost of living is a concern for many residents. Although housing costs are usually viewed as the main problem, transportation is a big part of the solution. By building complete communities where homes, workplaces, and schools are near to each other, and by providing inexpensive transportation choices that reduce travel by private automobile and therefore parking demand, we can help residents save thousands of dollars each year.

### Aging Population

In the next 30 years, the number of Vancouver residents aged 60 and over will more than double. An aging population means changes in travel patterns and more people with physical challenges getting around our city. By building streets and public spaces with accessibility in mind, and providing transportation options that work for all people, we can ensure a future that allows everyone to meet their daily needs and participate in public life.

### Rising Fuel Prices

Fossil fuel prices have increased significantly in the past decade, and will continue to rise as global oil production peaks. By prioritizing sustainable transportation options, we can reduce oil dependency and help our residents, businesses, and local industry survive and even thrive in a post-carbon world.

### Climate Change

Fossil fuels are a source of carbon, released into the atmosphere as a greenhouse gas when burned for energy. Climate change is already having severe impacts around the world, and conditions will worsen unless greenhouse gas emissions are sharply reduced. In the City of Vancouver, vehicles account for over 30% of greenhouse gas emissions. We can make a big difference by prioritizing sustainable transportation choices that use renewable fuels or use fuels more efficiently (transit, ride-sharing, and low-carbon vehicles), or don't use fuel at all (walking, cycling).

### Growing Downtown

Vancouver's downtown is home to more people, jobs, and activity than ever, and it plays a critical role as a cultural and economic centre for the city, region, and province. A vibrant, accessible, and walkable downtown is viewed as a key aspect in making Vancouver an appealing destination for visitors and new residents. By offering more public space on our streets, we can strengthen the downtown's role as a gathering place for the city and region. By providing a range of mobility options within our limited road space, we can also increase our ability to move people to, from, and within downtown.



## GOALS

Transportation 2040 is about more than just mobility. The plan includes a number of goals that fall under the three pillars of sustainability. Together they address the challenges we face and support an economically, environmentally, and socially sustainable city. The goals support each other across issues; striving for a social goal, for example, will also move forward economic and environmental goals and advance overall sustainability.

These goals are aligned with transportation goals in the City's Greenest City 2020 Action Plan. Relevant Greenest City goals include:

- Making the majority of trips on foot, bike, and transit
- Eliminating dependence on fossil fuels
- Breathing the cleanest air of any major city in the world



### Economy

We envision **a smart and efficient transportation system that supports a thriving economy while increasing affordability.**

Our goals to support this economic vision are to:

- Enable the exchange of goods, services, and ideas throughout the city and region by making better use of our limited road capacity and transportation networks
- Foster a quality of life that retains and attracts businesses and employees while enhancing the city's global image
- Provide inexpensive transportation options that make it easier for households to go car-lite or car-free, resulting in more money that can be spent on housing or in the local economy
- Support the city's continued role as an international tourist destination, major port, and Asia-Pacific gateway



### People

We envision **healthy citizens in a safe, accessible, and vibrant city.**

Our goals to support this social vision are to:

- Facilitate and encourage active lifestyles while improving air quality
- Support vibrant public spaces that encourage a culture of walking, cycling, and social interaction
- Work to eliminate traffic-related fatalities, and address concerns of personal security
- Enable people of all ages and abilities to get to where they need to go, comfortably and safely



### Environment

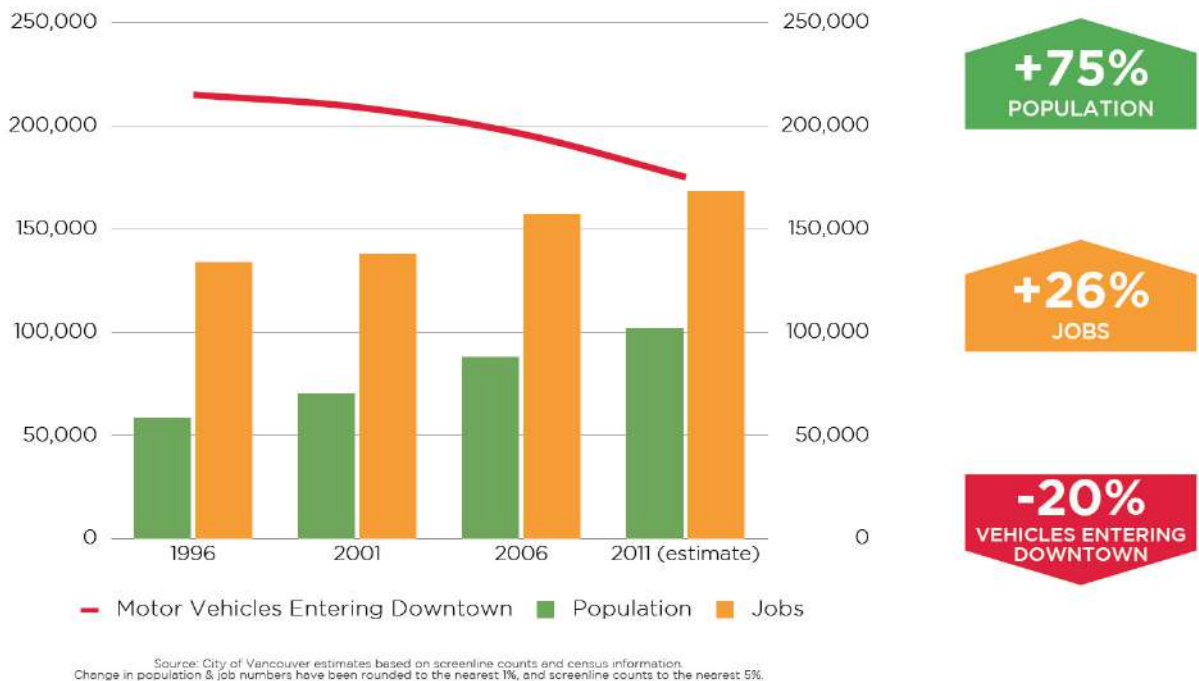
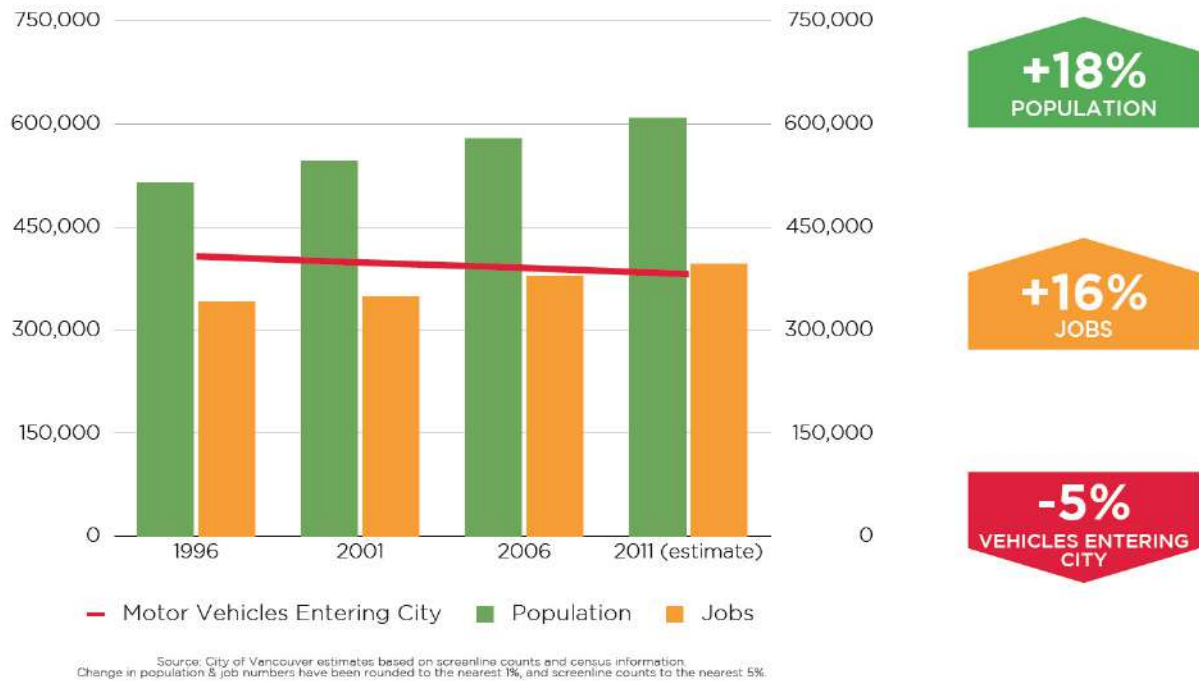
We envision **a city that enhances its natural environment, ensuring a healthy future for its people and the planet.**

Our goals to support this environmental vision are to:

- Keep the air we breathe clean and reduce greenhouse gases and other emissions
- Support compact community development, helping to preserve natural habitat and agricultural land throughout the region
- Improve access to open spaces and fresh local produce
- Be resilient in the face of climate change and increasing fuel prices, helping residents and local businesses survive and even thrive in a post-carbon era

## TRENDS

Over the past 15 years, the number of people living, working, and travelling in the city has grown, and there are more trips in the city than ever. Despite this, the total number of cars entering the city and downtown has declined. The overall growth has been accommodated on foot, bicycle, and transit. The charts below show the trend occurring in: (1) Vancouver (citywide); and (2) the downtown core.



# TARGETS

Transportation 2040 includes specific and measurable targets that align with the larger goals of the plan. The targets inspire action, ensure accountability, and help us ensure we are on the right track towards meeting our goals.

## Mode Share

Mode share refers to the proportion of trips made by each mode (or method) of travel. It is one of the most common ways of measuring travel behaviour and setting long-term targets, and it provides a good understanding of how people get around. The mode share target in this plan is a measure of all person trips to or within the city, for any purpose. The target reflects the increasing number of trips that will occur with population and job growth in the future.

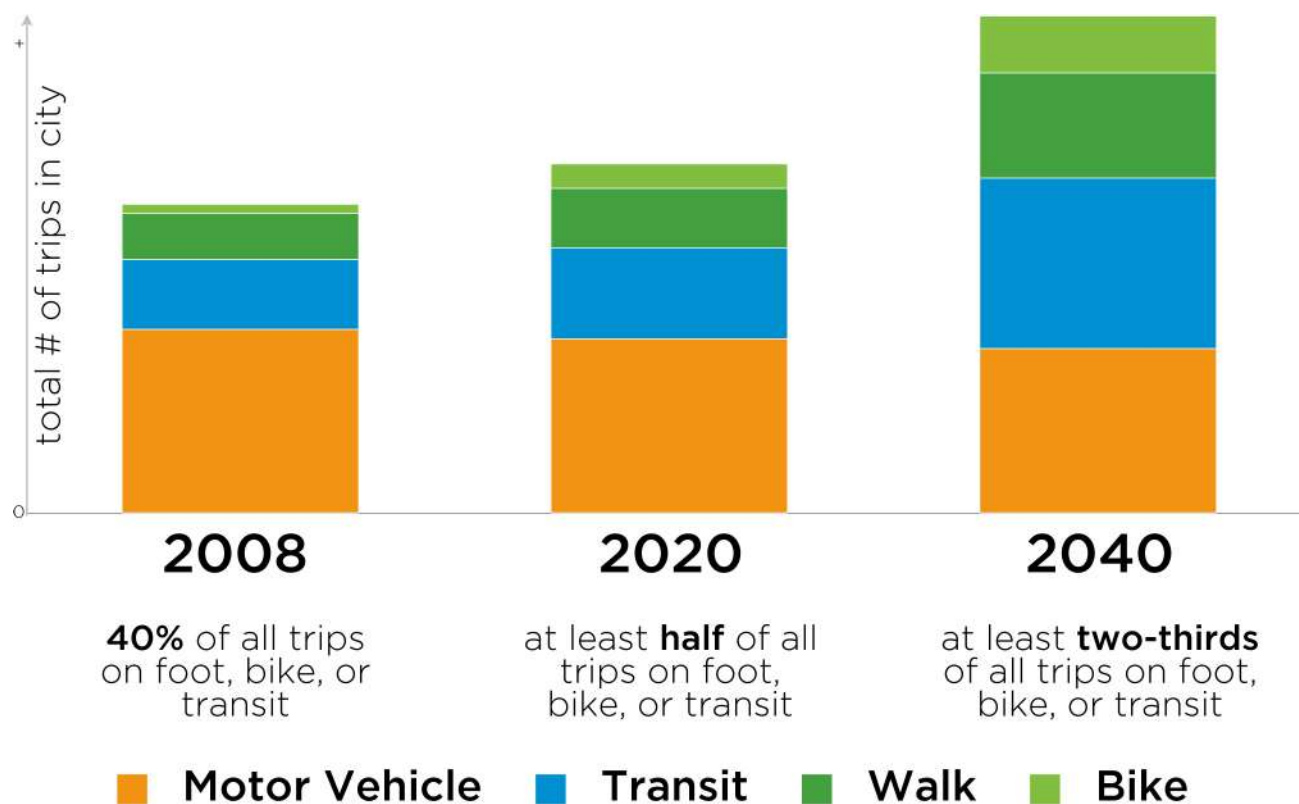
Trip diaries and surveys are typically the primary source of quantitative data for mode share, although trip counts are important to help validate results.

Transportation 2040 builds upon Greenest City targets. The relevant Greenest City target for mode share is:

- Making the majority (over 50%) of trips on foot, bike, and transit by 2020

## New 2040 Target

*By 2040, at least two-thirds of all trips will be made on foot, bike, or transit. The total number of trips by sustainable modes will grow significantly, while motor vehicle volumes will slightly decline.*



The mode share target was developed using TransLink's regional transportation model as well as a robust trend analysis. The regional model considered a range of factors, including forecasted population and employment growth, shifting demographics, changing transportation costs, and planned regional road and transit projects. The trend analysis provided a more refined understanding of recent changes in travel behaviour and active transportation trips. It looked at a number of data sources including pedestrian, cyclist, and motor vehicle volumes at various locations, growing transit passenger volumes as services have been added, and census and TransLink trip diary surveys.

Monitoring mode share also allows us to track our progress in supporting goods and services movement. Through our traffic counts, we know that goods and services movement typically accounts for 1–5% of traffic on any given street, with a maximum of 8% on Knight Street, the city's busiest truck route. The mode share target in the plan supports a slight reduction in general motor vehicle traffic on our streets, which is consistent with past trends and provides more space for services and deliveries.

## Distance Driven

A target for the number of kilometres travelled by vehicle (vehicle kilometres travelled, or VKT) is important because it can provide a measure of fuel consumption and emissions. It also accounts for trips 365 days a year. Unfortunately, limited data availability makes VKT a difficult measure to reliably track.

Transportation 2040 builds upon Greenest City targets. The relevant Greenest City target for distance driven is:

- By 2020, the average distance driven per resident is reduced by 20% (from 2007 levels)

The Greenest City distance driven target is based on detailed preliminary work done in 2009 by the regional transportation target working group, which was led by Metro Vancouver and included representatives from TransLink, the City, and other municipalities.

### Existing 2020 Target

*Transportation 2040 supports the Greenest City target for reducing distance driven.*

## Tracking Progress

Limited data availability and reliability can make it difficult to set targets and track progress. Improved data collection, monitoring, and modelling are an important part of this plan, and require commitment and support from the City, TransLink, and partner agencies. See the *Tracking Progress* section for specific policies and actions on these topics.

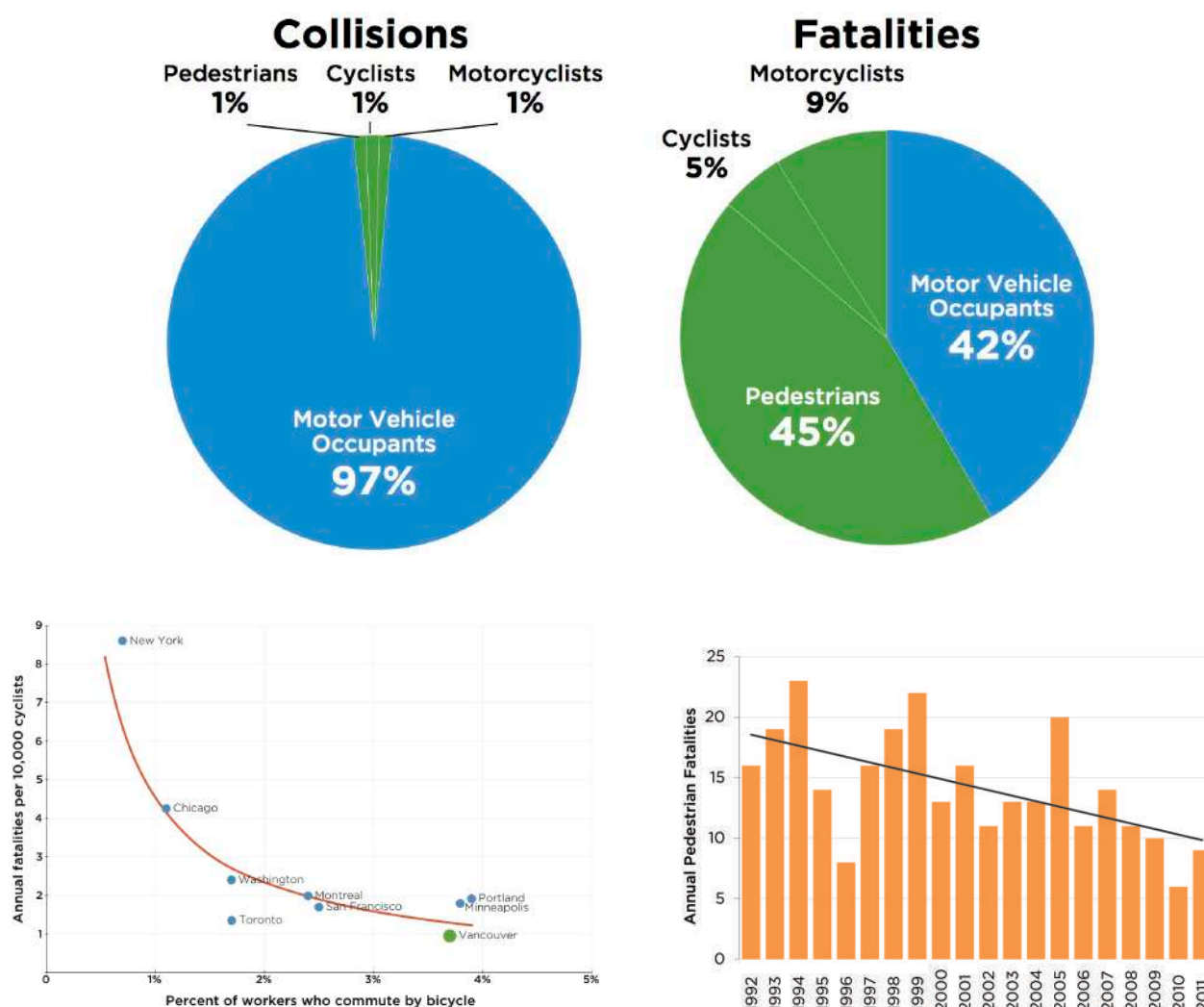
## SAFETY GOAL

*Our goal is to move toward zero traffic-related fatalities.*

Vancouver's ultimate safety goal is to eliminate all fatalities from its transportation system. We recognize the magnitude of this challenge, and that responsibility is dispersed across multiple jurisdictions. However, we also see that great strides are being made around the world to this end and that more and more public and private agencies are recognizing that zero fatalities is the only acceptable goal.

We will work closely with our partners to examine the location and contributing factors of any collisions resulting in death and identify appropriate steps to take in response, whether they be engineering, enforcement, and/or education interventions. A special emphasis will be placed on safety for at-risk groups (for example, children, seniors, and those with mobility challenges).

This plan may very well not achieve this goal on its own, but we believe it is a worthy first step. One fatality is one too many.



Source: Pucher, J. and Buehler, R., "Analysis of Bicycling Trends and Policies in Large North American Cities: Lessons for New York", University Transportation Research Center, March 2010



## **B. DIRECTIONS**

## DIRECTIONS OVERVIEW

This plan includes high-level policies and specific actions grouped into the transportation-related categories listed below. Each category includes a short vision statement to help summarize the overall intent. The following pages describe the background story, policies, and actions for each of these categories.

- **Land Use** — Use land use to support shorter trips and sustainable transportation choices.
- **Walking** — Make walking safe, convenient, comfortable, and delightful. Ensure streets and sidewalks support a vibrant public life and encourage a walking culture, healthy lifestyles, and social connectedness.
- **Cycling** — Make cycling safe, convenient, comfortable, and fun for people of all ages and abilities.
- **Transit** — Support transit improvements to increase capacity and ensure service that is fast, frequent, reliable, fully accessible, and comfortable.
- **Motor Vehicles** — Manage the road network efficiently to improve safety and support a gradual reduction in car dependence. Make it easier to drive less. Accelerate the shift to low-carbon vehicles.
- **Goods, Services, and Emergency Response** — Support a thriving economy and Vancouver's role as a major port and Asia-Pacific gateway while managing related environmental and neighbourhood impacts. Maintain effective emergency response times for police, fire, and ambulance.
- **Education, Encouragement, and Enforcement** — Encourage sustainable transportation choices and educate all road users to promote safe and respectful behaviour. Support legislation and enforcement practices that target dangerous conduct.

Although several categories reflect individual modes of travel, this is for organizational purposes only. In reality we are a multi-modal city. No one person relies on a single way to get around for every trip. Instead we do what is convenient and practical, making different choices depending on where we are going, what the weather is like, and what we have to do that day. A person might cycle to a nearby transit station, take the train towards their office, and walk the rest of the way; or mostly cycle on sunny days, combine walking and transit when it rains, and use car-sharing when there is a need to haul heavy things.

At its core this plan supports a multi-modal city with more transportation choices for people living in, working in, or just visiting Vancouver.

# MOVING PEOPLE, GOODS, AND SERVICES

## Moving People

*The City's transportation decisions will generally reflect a "hierarchy of modes" for moving people, as prioritized below.*

1. **Walking**
2. **Cycling**
3. **Transit**
4. **Taxi / Commercial Transit / Shared Vehicles**
5. **Private Automobiles**

The hierarchy is intended to help ensure that the needs and safety of each group of road users are sequentially considered when decisions are made, that each group is given proper consideration, and that the changes will not make existing conditions worse for more vulnerable road users, such as people on foot, bicycle, and motorcycle. Each time a new roadway is designed or an existing one changed, opportunities for improving walking and cycling will be reviewed. Separated cycling facilities are to be included in all new major roadway design and construction.

This is a general approach and does not mean that users at the top of the list will always receive the most beneficial treatment on every street. In highly constrained urban environments, it is not always possible to provide the ideal facilities for all users' needs, and compromises sometimes have to be made, including accommodating some users on parallel streets. This is especially the case for streets with limited rights-of-way that play a special role for a particular mode or use (such as transit or goods movement). Where modes lower in the hierarchy are prioritized, the reasons for this approach will be outlined and improvements to parallel alternative routes considered.

## Moving Goods and Delivering Services

*The efficient movement of goods and services is critical to city, regional, and national well-being.*

### Long-Distance Goods Movement

Vancouver plays a vital role as a port city and Canada's premier Asia-Pacific gateway. Container volumes through Vancouver ports are expected to grow significantly in the coming years. To accommodate this anticipated growth while reducing related impacts, the City supports shifting more long-distance, high-volume goods movement to rail, improving truck efficiency, and exploring alternatives such as short-sea shipping.

### Local Goods and Services

Smaller scale local movements and deliveries are essential to a thriving economy and high quality of life. Many of the trucks in the city are delivering goods and services that we rely on every day. As the number of people living and working in the city continues to grow, volumes of goods and services moving about will also increase. This plan includes a number of actions to support this increased activity while reducing related environmental and neighbourhood impacts, including continuing to manage an efficient local truck network, encouraging low-impact vehicles—such as cargo tricycles and electric or low-emission trucks—and managing on- and off-street loading spaces to ensure access to homes and businesses.

### Emergency Services

Emergency services require special consideration. This plan includes a number of measures to help ensure that police, fire, ambulance, and other emergency providers can reach their destinations in a timely fashion. At the same time, efforts to minimize response times should not be at the expense of traffic calming and other measures intended to reduce crashes and improve safety.

## LAND USE

*Use land use to support shorter trips and sustainable transportation choices.*

### BACKGROUND STORY

It is often said that the best transportation plan is a good land use plan, and for good reason. The built environment influences travel behaviour in a number of ways, often referred to as the “5Ds of the Built Environment”:

- *Destinations* – locating major destinations and centres at rapid transit stations or along corridors makes them easy to serve efficiently by frequent transit
- *Distance* – a well-connected, fine-grained pedestrian network enables shorter, more direct walking connections and is easier to serve cost-effectively with transit
- *Density* – higher levels of residential and employment density support more local amenities within walking and cycling distance, and justify high levels of transit service
- *Diversity* – a diverse mix of land uses and housing types makes it easier to live, work, shop, and play without having to travel far
- *Design* – well-designed buildings and public realm create places that feel interesting and safe to walk or cycle in

Good land use decisions have been and will continue to be a major part of Vancouver’s transportation successes. Over the years, we have strived to build complete communities that bring people closer to their daily destinations and make walking the easiest and most convenient option for many trips. We design buildings that put eyes on the street, fostering feelings of safety, and locate density to support high levels of efficient transit service.

Transportation 2040 is not a detailed land use plan. Consequently, this section does not contain specific actions, but rather high-level directions that are intended to help guide future land use plans and decisions to support sustainable transportation choices.

### POLICIES AT A GLANCE

#### 1. Land Use Directions

- 1.1. Prioritize and encourage a dense and diverse mix of services, amenities, jobs, and housing types in areas well-served by frequent, high-capacity transit
- 1.2. Locate major trip generators near rapid transit stations or along transit corridors
- 1.3. Design buildings to contribute to a public realm that feels interesting and safe

## **L 1. LAND USE DIRECTIONS**

### **L 1.1. Prioritize and encourage a dense and diverse mix of services, amenities, jobs, and housing types in areas well-served by frequent, high-capacity transit**

Areas that can be well-served by transit have greater capacity for people and jobs, so it makes sense to consider higher density developments in these areas. At the same time, not all station areas are the same, so it is important to recognize local context, including neighbourhood character and the need to preserve industrial land.

A diverse land use mix is also important, since it brings people closer to their daily destinations, reducing the distances people travel and supporting sustainable and affordable choices like walking and cycling. A diversity of housing choices and tenures, including affordable, accessible, and family housing, is especially important near high-capacity transit so that households can be less car-dependent. Residents who forgo car ownership can apply the resulting savings—which can amount to \$10,000 or more per year—to housing or other expenses. The savings increase further when residents are given a choice not to purchase parking they do not need. In effect, more money is available to spend on housing that costs less.

### **L 1.2. Locate major trip generators near rapid transit stations or along transit corridors**

An efficient transit corridor connects multiple high-demand locations along a reasonably direct line. For the customer, transit becomes more competitive since it is often the fastest, most direct route between any two points on the line. For the transit provider, more destinations and riders can be captured in fewer kilometres travelled leading to more cost-effective service provision.

Locating major destinations at rapid transit stations or along frequent transit corridors makes them easy to serve efficiently with high quality transit. As a result, fewer trips need to be made by automobile.

### **L 1.3. Design buildings to contribute to a public realm that feels interesting and safe**

Well-designed buildings help to increase the safety and attractiveness of the street environment, and can strongly influence whether someone chooses to walk, cycle, take transit or drive. Appropriately-scaled buildings maintain visual interest for people on foot or bike who are traveling at relatively slow speeds. Active frontages with many windows and doors create “eyes on the street”, increasing feelings of personal security. The City will continue to implement design guidelines for new buildings that support an interesting, pedestrian-scaled streetscape, and pursue measures to consolidate driveways and locate motor vehicle access points in lanes and away from bicycle routes and pedestrian paths wherever possible.



# WALKING

*Make walking safe, convenient, comfortable, and delightful. Ensure streets and sidewalks support a vibrant public life and encourage a walking culture, healthy lifestyles, and social connectedness.*

## BACKGROUND STORY

Pedestrians will continue to be the City's top transportation priority. We recognize that almost everyone is a pedestrian for at least part of each journey—whether they walk, cycle, take transit, or drive. Walking, which includes movement with wheelchairs and other mobility aids, is the cheapest and most space-efficient way to travel, increases opportunities for community interaction, and is healthy for both people and the environment. It's also good for business—our most successful commercial streets tend to be the ones with the highest pedestrian volumes.

Vancouver is a leader in North America when it comes to walking. A big part of our success is that our city was laid out on a network of closely spaced streets, so walking routes are almost always direct. Good land use planning has also been critical, bringing people closer to their daily destinations and making walking the easiest and most convenient option for many trips. Increasingly, we have strived to build an environment that is accessible and interesting for walking.

However, there is plenty of room for improvement. In some parts of the city, sidewalks are too narrow, bumpy, or missing curb ramps. Some streets are unpleasant to walk along because there is little or no buffer between people on foot and moving traffic, or the streets have long blocks with limited opportunities to safely cross. Insufficient pedestrian lighting or poorly designed buildings and spaces can make some places feel less safe, particularly at night.

This plan seeks to build upon our successes and address deficiencies by focusing on pedestrian safety and accessibility, by addressing gaps in the network, providing wider sidewalks in congested areas, and creating more interesting streets and public spaces that feel safe and support a vibrant public life. New development, especially in areas outside the downtown, will create opportunities to bring destinations closer together and improve the pedestrian environment.

Education, encouragement, and enforcement are also important parts of our walking strategy, and are covered in a separate section.

## POLICIES AT A GLANCE

### 1. Pedestrian Network

- 1.1. Make streets safer for walking
- 1.2. Provide generous, unobstructed sidewalks on all streets
- 1.3. Make streets accessible for all people
- 1.4. Make streets and public spaces rain-friendly
- 1.5. Address gaps in the pedestrian network
- 1.6. Provide a blueprint for great pedestrian realm design
- 1.7. Make the city easy to navigate on foot

### 2. Public Spaces

- 2.1. Enable and encourage creative uses of the street
- 2.2. Create public plazas and gathering spaces throughout the city

## POLICIES AND ACTIONS IN DETAIL

### W 1. PEDESTRIAN NETWORK

The pedestrian network refers to the city's streets, sidewalks, and paths that are intended for walking. Throughout this document, this includes movement with wheelchairs and other mobility aids.

Much of the city's street network was laid out on various grid patterns over a century ago, forming the bones of a city where it is relatively easy to walk. Although Vancouver's walking network is fairly complete, gaps and barriers do exist, and opportunities exist to improve safety, comfort, and accessibility. Additionally, as new streets are built and existing ones rebuilt, opportunities abound to create a better public realm that fosters feelings of safety, comfort, and delight for those on foot.

#### W 1.1. Make streets safer for walking

People on foot are the most vulnerable users of our streets. They are more likely to be injured or killed when collisions occur, particularly when high speeds are involved. Pedestrians are involved in less than 2% of reported collisions, but account for about 45% of fatalities. Although collisions involving pedestrians have been declining over the past 15 years, the City will address safety "hotspots," prioritizing improvements to high-crash locations and areas with high walking potential. It will also continue to implement pedestrian-oriented designs as streets are rebuilt, improving safety for all modes of travel.

Intersections are particularly important, since this is where about 75% of collisions involving people on foot occur.

##### Actions

- W 1.1.1. Address pedestrian safety "hotspots" with a high number of collisions or fatalities, starting by implementing recommendations from the 2012 Pedestrian Safety Study and through future safety assessments as needed.
- W 1.1.2. Implement pedestrian-oriented designs as streets are rebuilt and infrastructure is replaced to improve safety for all modes of travel. Specific measures include:
  - a. adjusting and extending curbs at intersections to minimize crossing distances and curb radii, while considering needs of other road users;
  - b. installing countdown timers and reviewing signal timing to ensure adequate crossing time for people with limited mobility;
  - c. maximizing visibility at crosswalks through appropriate lighting, high-visibility pavement markings, curb extensions, and clear sight lines;
  - d. implementing raised sidewalks or other treatments to prioritize safe walking across lanes, driveways, and some local streets; and
  - e. reducing vehicle speeds through traffic calming measures as appropriate.

Consider more rapid implementation for measures that demonstrate significant safety gains.

- W 1.1.3. Implement signal measures to prioritize pedestrian movement and safety at intersections, considering approaches such as increased time to cross, leading pedestrian intervals, eliminating right turns on red lights, minimizing the need to push buttons, and scramble intersections.
- W 1.1.4. Implement an ongoing spot improvement program to address emerging issues of safety and comfort related to walking, such as installing pedestrian-scale lighting along priority walking streets.

- W 1.1.5. Consider ways to improve lane environments for people on foot while maintaining essential functions such as loading, parking, fire access, and services, particularly in locations where:
  - a. the lane is the shortest path between key walking destinations; and
  - b. the lane serves as a primary residential and/or business access point.
- W 1.1.6. Minimize the width and number of new driveways that cross sidewalks and other walking paths.

## **W 1.2. Provide generous, unobstructed sidewalks on all streets**

Sidewalks can get very crowded in busy commercial areas, near transit stations and other major destinations, and at pinch points. Providing generous, unobstructed sidewalk space supports more walking and street activity, and helps ensure people with mobility aids can get around.

See *Section C: Delivering the Plan* for more detail on widening sidewalks around commercial areas and transit.

### **Actions**

- W 1.2.1. Develop minimum and desired pedestrian guidelines for different types of streets, outlining sidewalk clear zone widths, accessibility features, surface treatments, street tree standards, seating types, and furniture placement.
- W 1.2.2. Review and enforce bylaws to ensure sidewalk clear zones remain free of obstructions.
- W 1.2.3. Identify, prioritize, and address locations with insufficient sidewalk width by:
  - a. removing or relocating obstacles;
  - b. reallocating road space; and/or
  - c. requiring setbacks in new development.

## **W 1.3. Make streets accessible for all people**

The city's streets and public spaces should be usable by everyone, including seniors, families with young children, and those with mobility, vision, hearing, and cognitive impairments. An accessible public realm is the foundation of an inclusive city, promoting equity by allowing all people to meet their daily needs and participate in public life.

It will become even more important in the future—as the number of people aged 60 or older is expected to more than double by 2040. Accessibility improvements such as unobstructed pathways, smooth rolling surfaces, curb ramps, accessible pedestrian signals, and comfortable places to rest will be incorporated into all street capital projects that involve rebuilding these elements.

### **Actions**

- W 1.3.1. Continue to install or replace missing or deficient curb ramps; develop criteria for prioritizing implementation.
- W 1.3.2. Continue to install accessible pedestrian signals citywide through ongoing replacement programs, at locations prioritized in consultation with representatives of the visually-impaired community.
- W 1.3.3. Continue to maintain and rehabilitate sidewalks and pathways so they are free of trip hazards and debris; use smooth materials and designs that are comfortable for users of strollers, wheelchairs, or other mobility aids.
- W 1.3.4. Improve and enforce measures to maintain accessibility around construction zones and special events, for example by requiring contractors to establish temporary paths where necessary, and by implementing an escalating fine structure for contractors who repeatedly break related city bylaws.

- W 1.3.5. Provide accessible public restrooms in high-demand locations, through measures including:
  - a. encouraging TransLink to provide public restrooms at all transit stations;
  - b. monitoring the performance of existing automated public toilets (APTs), and installing and maintaining additional APTs if successful;
  - c. maintaining or extending hours for City-owned facilities at parks, libraries, community centres, and other locations;
  - d. working with private partners to make their restrooms available for public use; and
  - e. identifying restroom locations through wayfinding maps and online tools.
- W 1.3.6. Maintain and update universal accessibility guidelines to help guide urban design and street reconstruction.
- W 1.3.7. Provide opportunities for rest at regular intervals by increasing the amount of seating available on and along sidewalks and other pedestrian paths.

#### W 1.4. Make streets and public spaces rain-friendly

Vancouver is rainy for much of the year. Drizzly days discourage many people from walking, and puddles can create instant obstacles and splash zones. Awnings are helpful, but poorly designed ones often cover only a portion of the sidewalk and drip water onto people passing below. The City has implemented weather protection guidelines, but currently these only apply to certain building types in parts of the city. Careful street tree selection, size, and placement can also help provide more respite from the rain. Public realm design and maintenance approaches can minimize the annoyances of a rainy day and even celebrate rain, helping Vancouverites embrace our wet climate.

##### Actions

- W 1.4.1. Review and expand weather protection guidelines to facilitate appropriately wide, continuous, well-designed awnings or canopies in commercial areas throughout the city.
- W 1.4.2. Include strategies to reduce ponding in street maintenance guidelines. Prioritize maintenance at locations with more walking and street activity.
- W 1.4.3. Incorporate rain-friendly design features into public spaces.

#### W 1.5. Address gaps in the pedestrian network

Vancouver is fortunate to have relatively fine-grained street grids through most of the city. Short blocks with frequent intersections make for direct walking paths with multiple options to most destinations. Gaps or barriers in the network do exist, however, particularly across False Creek, around rail tracks, and in locations where the regular street network is disrupted. Pedestrians currently do not have access on the east side of the Burrard Bridge, for example, and the Granville Bridge pedestrian paths are narrow, uncomfortable, and inaccessible for many people due to steps at pedestrian crossings. The rail infrastructure in False Creek Flats, while providing a critical transportation function, is a significant north-south barrier. Some arterials, such as portions of Oak Street and Marine Drive, have longer blocks with greater distances between signalized crossings so crossing them on foot is challenging.

The City will address significant gaps in the walking network. In areas with poor pedestrian connectivity, new or improved pathways and signalized crossings will be created where feasible. Priority will be given to locations that increase access to transit or are other major walking trip generators, such as schools and community centres.

See *Section C: Delivering the Plan* for more detail on improving conditions on the False Creek bridges.

**Actions**

- W 1.5.1. Improve pedestrian connectivity and accessibility by addressing gaps and deficiencies in the network. High-priority locations include:
  - a. False Creek bridges;
  - b. False Creek Flats / Northeast False Creek;
  - c. transit stations with poor connectivity; and
  - d. major streets with long blocks and/or limited crossing opportunities.
- W 1.5.2. Review crosswalks that are currently closed for pedestrians, and consider opening them wherever feasible and safe.
- W 1.5.3. Develop a strategy to prioritize and address missing or deficient sidewalks.
- W 1.5.4. Work with public and private property owners to assess and improve pedestrian connectivity, particularly within new developments and where the grid is less connected.

**W 1.6. Provide a blueprint for great pedestrian realm design**

The quality of the public realm has a significant impact not just on whether people walk, but on civic life as a whole. Great streets improve safety for all modes of travel, and are designed to be accessible to everyone. They are comfortable places, allowing for movement while supporting public life and local commerce. When designed as a green network, they also contribute to the natural environment and support local ecosystems.

City street design guidelines will support high-quality, pedestrian-friendly streets that feel safe, interesting, and comfortable. At the same time, they will recognize that streets are not all the same—some are part of the transit or truck network, for example, while others might be gathering spaces. Some streets may function in different ways depending on the time of day, week, or season. Commercial streets should be lively spaces that attract people and support local businesses.

**Actions**

- W 1.6.1. Advance street typologies and guidelines for the pedestrian realm to guide new developments, street and sidewalk restoration, and other improvements. Street types will reflect transportation function and land use context, as well as other local features or special attributes. Guidelines should support multiple objectives including safety and comfort, accessibility, connectivity, public life, local commerce, ease of maintenance, and ecological sustainability.
- W 1.6.2. Explore opportunities to improve local ecology when designing and (re)building streets and other rights-of-way, for example by improving wildlife habitat and stormwater management, restoring native flora, increasing the number, size, and health of street trees, and daylighting lost streams.

**W 1.7. Make the city easy to navigate on foot**

Maps and other wayfinding measures are essential to helping people navigate the city and find their way around. The City has made great strides in recent years and will continue to refine and improve wayfinding, for example by working with local businesses, supporting online tools, and ensuring the system is easily understandable to locals and newcomers alike, including those with limited cognitive ability.

**Action**

- W 1.7.1. Expand and maintain a pedestrian wayfinding system that is consistent, legible, and user-friendly. Provide data in an open format to support third-party mobile application development.



## W 2. PUBLIC SPACES

Streets and sidewalks are a significant part of the public realm. They are not just spaces to move through, but places to *be*. The 2010 Winter Olympic Games and recent VIVA Vancouver public space initiatives have demonstrated that streets can fulfill transportation needs while supporting a vibrant public life that benefits both commerce and community.

### W 2.1. Enable and encourage creative uses of the street

On many streets, opportunities exist to use space differently to support a vibrant city and economy while meeting and better serving the transportation needs of the city. The City will continue to enable and encourage creative uses of streets and public rights-of-way through pilot projects, competitions, and funding partnerships.

#### Actions

- W 2.1.1. Expand special event and public space programs (such as VIVA Vancouver) to enable and encourage creative street uses, for example through pilots, competitions, and funding partnerships.
- W 2.1.2. Streamline processes to make it easier to hold temporary and recurring events in public rights-of-way, including developing standard traffic management and transit rerouting plans for commonly used areas.

### W 2.2. Create public plazas and gathering spaces throughout the city

Public plazas and gathering spaces play a vital role in public life. They enable celebrations and protests, community events, and neighbourly interaction. When designed, located, and programmed appropriately, they are vibrant spaces that allow lingering and support local businesses while encouraging walking, cycling, and transit use.

There are many different approaches to pedestrian-priority streets and spaces, from car-free approaches to shared-spaces that mix pedestrians with other forms of slow-moving traffic (with priority given to pedestrians and design details that invite pedestrians to use the entire street). Streets can change depending on the time of day, week, or season. In all cases, the needs of cyclists, transit, services, and delivery vehicles require careful consideration.

Vancouver has begun to install parklets (on-street parking spaces transformed into sidewalk extensions with seating) modeled on the approaches of New York and San Francisco. These cities have also developed plaza programs to provide high-impact public spaces at a low cost by identifying excess road space to transform with paint, plants, and furniture. Other aspects of the plan call for traffic calming measures that could also be used to create public spaces.

See *Section C: Delivering the Plan* for more detail on creating public plazas and gathering spaces.

#### Actions

- W 2.2.1. Create pedestrian-priority streets and spaces, considering needs for cycling, transit, services, and deliveries to determine appropriate design treatments. Potential locations (subject to additional consultation) include:
  - a. 800-block Robson Street (Robson Square);
  - b. portions of Robson and/or Granville streets;
  - c. Hamilton and/or Mainland streets between Nelson and Davie; and
  - d. other locations as identified through future planning processes.
- W 2.2.2. Implement a permit-based 'Parklet' program to transform on-street parking spaces into mini-plazas or sidewalk extensions.
- W 2.2.3. Implement a City-led 'Pavement-to-Plazas' program to create low-cost, high-impact public spaces by transforming underused street rights-of-way.
- W 2.2.4. Use traffic calming measures as opportunities to create mini-plazas or parklets.

# CYCLING

*Make cycling safe, convenient, comfortable, and fun for people of all ages and abilities.*

## BACKGROUND STORY

For many people, cycling is a healthy, fun, and inexpensive way to travel. It creates no emissions, costs little, and can be a great way to experience the city's streets and neighbourhoods while getting exercise.

Cycling can also be practical, since it is often the fastest way to get around for short and medium length trips. Many trips in the city are less than 5 km, which is less than 20 minutes by bike.

There is also mounting evidence that cycling is good for local business. Surveys show that cyclists often have more disposable income than drivers, and are more likely to shop locally.

While cycling is growing in popularity, many people are discouraged from riding because it seems dangerous or impractical. There are many challenges, including a lack of direct routes, finding convenient and secure parking, weather, and topography, but the biggest concern for most people is motor vehicle traffic.

In the past, we have mostly built facilities that appeal to people who are already comfortable riding in traffic. To reach more people, efforts must be made to make cycling appeal to a wider audience. This includes building routes that are comfortable for everyone, including children, the elderly, and novice cyclists.

Education, encouragement, and enforcement are also important parts of our cycling strategy, and are covered in a separate section.

## POLICIES AT A GLANCE

### 1. Cycling Network

- 1.1. Build cycling routes that feel comfortable for people of all ages and abilities
- 1.2. Upgrade and expand the cycling network to efficiently connect people to destinations
- 1.3. Maintain bikeways in a state of good repair
- 1.4. Make the cycling network easy to navigate

### 2. Parking and End-of-Trip Facilities

- 2.1. Provide abundant and convenient bicycle parking and end-of-trip facilities

### 3. Multi-Modal Integration

- 3.1. Make it easy to combine cycling with other forms of transportation
- 3.2. Provide a public bicycle system

## POLICIES AND ACTIONS IN DETAIL

### C 1. CYCLING NETWORK

The availability of comfortable, well-connected routes for cycling is critical to encouraging more people to cycle for their daily needs and to improving road safety. Although this section focuses on designated cycling routes, most cycling trips require travel along other streets to reach destinations. Accordingly, all public streets should be designed with the safety of vulnerable road users in mind.

#### C 1.1. Build cycling routes that feel comfortable for people of all ages and abilities

Many people are interested in cycling but are afraid of motor vehicle traffic. For cycling to be a viable and mainstream transportation choice, routes should feel comfortable and low-stress for people of all ages and abilities, including children, the elderly, and novice cyclists.

Design details depend on a variety of factors, but especially motor vehicle speeds and volumes. Bicycle routes on arterials and other busy streets should be physically separated wherever possible. Routes on neighbourhood streets may require traffic restrictions, speed management and/or parking restrictions to ensure comfort for a broad range of users. Designs should ensure sufficient visibility at intersections and driveways, and minimize the potential for conflicts with car doors, pedestrians, and other cyclists. Other factors to consider include topography—by providing well-marked alternative routes around steep hills, for example—and requirements for un-conventional bikes and other forms of active transportation, including recumbents, cargo cycles, bikes with trailers, and skateboards.

The needs of all road users and adjacent residents and businesses are also important in bike facility planning and design. Potential impacts to adjacent residents and businesses, including access for customers and deliveries, and on-street parking, must be carefully considered.

#### Actions

- C 1.1.1. Adopt and implement planning and design guidelines to support a network of routes that feel comfortable for people of all ages and abilities (AAA), including design treatments and interventions for:
  - a. providing physically separated bicycle facilities on busy streets where motor vehicle volumes or speeds will remain high;
  - b. managing and reducing motor vehicle traffic volumes and speeds on neighbourhood routes through traffic diversion and other calming measures;
  - c. providing sufficient operating space for bicycle traffic through parking management and other measures;
  - d. designing safe intersections and crossings with improved visibility and managed conflicts (for example, through turn restrictions and signal priority);
  - e. reallocating road space from general traffic and/or motor vehicle parking where appropriate;
  - f. accommodating unconventional bikes and other forms of active transportation, such as cargo bikes, delivery tricycles, in-line skates, and skateboards;
  - g. highlighting potential conflict zones with pavement markings; and
  - h. prioritizing cyclist movements on key routes using tools such as reorienting stop signs and synchronizing traffic signals at the prevailing speed of bicycle traffic.
- C 1.1.2. Develop a cycling comfort index to help identify routes that do not meet design guidelines for people of all ages and abilities (AAA), and to inform design approaches for new routes and route upgrades.
- C 1.1.3. Minimize the width and number of new driveways that intersect bike routes.

- C 1.1.4. Conduct regular surveys to evaluate user comfort and perceived safety on cycling facilities.

## C 1.2. Upgrade and expand the cycling network to efficiently connect people to destinations

Cycling routes are most useful when they connect to form a cohesive and legible network providing direct and convenient access to important destinations like schools, community centres, libraries, transit stations, and employment and shopping areas. A good network is easy to understand and has an appropriate density of routes, spaced more closely together in urban centres and areas with the highest cycling potential. Topography is another important factor to consider in network design, since steep hills can discourage all but the most determined person from riding a bicycle.

A complete network for people of all ages and abilities cannot be created overnight. Although priority will be given to locations with the highest existing or potential demand, the City will also expand the network elsewhere as opportunities arise. All-ages-and-abilities (AAA) facilities may not always be feasible in the short term, as in areas with very limited rights-of-way, for example. In these instances, other design standards may be used.

See *Section C: Delivering the Plan* for more detail on implementing short-term cycling network improvements.

### Actions

- C 1.2.1. Review the existing cycling network to identify missing routes, gaps, and deficiencies, with a focus on facilities that feel comfortable for people of all ages and abilities.
- C 1.2.2. Develop, regularly update, and implement short-term (approximately 5-year) network improvement strategies to address gaps and deficiencies in the network, in consultation with residents, businesses, and other stakeholders:
  - a. using route spacing guidelines for different areas of the city, with closer spacing in the Metro Core and areas with high cycling potential;
  - b. upgrading key existing routes with high existing or potential ridership;
  - c. prioritizing critical gaps in the network and connections to key destinations, including schools, community centres, major transit stations, and commercial high streets; and
  - d. favouring simple and direct connections with few deviations to establish an easily understood and memorable network of routes, while also considering the importance of topography in route choice.
- C 1.2.3. Undertake a cycling safety study to identify cycling safety “hotspots” with a high number of collisions.
- C 1.2.4. Implement an ongoing spot improvement program for existing bicycle routes to address safety “hotspots” as well as emerging safety, comfort, and bicycle capacity issues, and to fill gaps in the network.
- C 1.2.5. Incorporate separated bicycle facilities into the design and construction of all new major roads.
- C 1.2.6. Consider cycling improvements as part of all street capital projects, installing and upgrading routes as opportunities arise through construction and rehabilitation projects.
- C 1.2.7. Work with adjacent municipalities and other partners to improve cycling connections across municipal boundaries.

## C 1.3. Maintain bikeways in a state of good repair

People on bicycles are especially vulnerable to potholes, uneven paving, broken glass, leaves, and other debris on the road surface—far more than when in a motor vehicle. Black ice and snow are particularly dangerous hazards that can deter even the most confident person from cycling. Routine and targeted maintenance helps keep routes smooth and free of debris, improving safety and comfort for new and experienced riders alike.

**Actions**

- C 1.3.1. Develop and implement maintenance and cleaning guidelines for bike routes, prioritizing routes with high ridership.
- C 1.3.2. Improve and enforce measures to maintain comfortable cycling access around construction zones and special events, for example by requiring contractors to establish temporary bicycle lanes, and by implementing an escalating fine structure for contractors who repeatedly break related city bylaws.
- C 1.3.3. Support the development of a mobile application that makes it easier to make maintenance requests.

**C 1.4. Make the cycling network easy to navigate**

A seamless, easy-to-understand wayfinding system—including directional signage, maps, and trip-planning tools—is important to help people find the bicycle network and confidently navigate from place to place. Consistent and direct routings, even across municipal boundaries, minimize the need to refer to maps. Where cycling is permitted or prohibited through pedestrian-priority areas and other types of road closures, clear design and signage is important to communicate expectations.

**Actions**

- C 1.4.1. Develop and implement a consistent, legible wayfinding system on all bicycle routes and greenways. Coordinate with other wayfinding efforts and work with TransLink and neighbouring municipalities to encourage a common approach across modes and local boundaries.
- C 1.4.2. Produce and regularly update a citywide cycling map, including a digital version. Provide route information in an open format to support third-party mobile application development.

**C 2. *PARKING AND END-OF-TRIP FACILITIES***

People need convenient places to securely park their bicycle when they reach their destination—whether for five minutes or for the entire day. End-of-trip facilities such as change rooms and gear storage facilities, and in some cases showers, may also be useful for some commuters who travel at high speed over longer distances or in rainy weather.

**C 2.1. Provide abundant and convenient bicycle parking and end-of-trip facilities**

Different kinds of bicycle parking offer varying levels of convenience and security. Well-designed bike corrals or sidewalk racks provide a basic level of security and create easy short-term access to shops and other destinations. In locations where bikes are parked for longer periods—at home, work, or transit stations, for example—higher levels of security are important. This can be accommodated in different ways, including secure bike cages, indoor stations, pay-as-you-go lockers, or even fully-automatic storage systems. Valet parking is a great way to provide secure parking at community and corporate events.

Location is important; parking should be quick and convenient to access at the beginning and end of every trip. At the same time, care should be taken to ensure sufficient space remains for pedestrian movement and activity.

**Actions**

- C 2.1.1. Periodically review policies for new developments to ensure abundant and conveniently located secure bicycle parking and end-of-trip facilities. Minimum requirements should support long-term mode share targets and ownership levels, and include convenient parking for visitors.
- C 2.1.2. Develop a retrofit program to make it easier to add bicycle parking and other end-of-trip facilities to existing buildings.

- C 2.1.3. Provide higher-security bicycle parking:
  - a. prioritizing major transit stations and other high-demand locations;
  - b. creating at least one downtown bike centre that includes additional maintenance and end-of-trip facilities;
  - c. providing convenient pay-as-you-go bicycle lockers in high-turnover areas; and
  - d. converting some motor vehicle parking at City-owned parking lots.
- C 2.1.4. Implement a strategy to provide abundant bicycle parking on streets and sidewalks while ensuring sufficient space for pedestrian movement, with components including:
  - a. guidelines for bike rack design and placement;
  - b. an on-street bike corral program;
  - c. a prioritization approach for commercial, residential, and other areas; and
  - d. an easy way for the public to submit requests for additional bicycle parking.
- C 2.1.5. Provide abundant, covered, and conveniently located bicycle parking at:
  - a. libraries, community centres, and other civic facilities; and
  - b. schools (in partnership with the school boards).
- C 2.1.6. Develop policy to ensure sufficient bicycle parking at corporate-sponsored and community events, for example through valet parking.
- C 2.1.7. Pilot a publicly available bike maintenance station on a high-volume bicycle route.

### C 3. MULTI-MODAL INTEGRATION

The role of cycling is greatly enhanced when integrated into a multi-modal system. Cycling extends the catchment area for transit services in a cost-effective manner, and provides fast and flexible mobility to customers at the beginning and end of their transit trips. Cycling can also extend walking trips, or be combined with other modes to maximize convenience.

#### C 3.1. Make it easy to combine cycling with other forms of transportation

The ability to transport one's bicycle on public transit and taxis greatly enhances the attractiveness of cycling and shared transport modes. Although TransLink's buses are all equipped with bicycle racks, passenger crowding and space constraints limit the number of bicycles that can be carried. Crowding on SkyTrain has led to restrictions on the on-board carriage of bicycles. A larger part of the solution is secure and abundant bicycle parking at stations and major exchanges so people can leave a bike while continuing to or from their final destination on transit.

Stations should be designed to facilitate movement for persons with bicycles and other mobility aids, for example through clear signage, stairway runnels, accessible fare gates, and large elevators with a direct, simple, and quick path to platforms and parking.

#### Actions

- C 3.1.1. Provide safe, convenient, and legible connections between major transit stations and the bicycle network.
- C 3.1.2. Work with TransLink to plan and implement abundant, secure, weather-protected bicycle parking at transit stations.
- C 3.1.3. Support measures to expand on-board carrying capacity of bicycles on public transit vehicles.

- C 3.1.4. Work with taxi industry to facilitate on-board carrying capacity of bicycles on taxis.
- C 3.1.5. Advocate for broader measures to accommodate bicycle circulation in new transit stations and station upgrades.

### **C 3.2. Provide a public bicycle system**

A public bicycle system provides a convenient and easy way to extend both walking and transit trips. Implementation should focus on areas with high cycling potential, good cycling facilities, and locations that maximize integration with transit. Implementation should also be coordinated with route safety improvements, as well as cycling education and skills programs. The system should be designed for compatibility with TransLink's emerging Compass Card system and allow for future expansion to UBC and other areas in the region.

See *Section C: Delivering the Plan* for more detail on providing a public bicycle system.

#### **Action**

- C 3.2.1. Develop and implement a public bicycle system in the Metro Core and other areas with high cycling potential.



# TRANSIT

*Support transit improvements to increase capacity and ensure service that is fast, frequent, reliable, fully accessible, and comfortable.*

## BACKGROUND STORY

Great transit is essential to our success as a multi-modal city. Transit complements walking and cycling by extending the range a person can travel and seamlessly linking pedestrian-oriented neighbourhoods to one another. It competes with driving for long-distance trips by providing an inexpensive and environmentally-friendly alternative to the private car. It moves very large numbers of people in small amounts of space, supporting a growing economy without contributing to congestion. By providing low-barrier access to key destinations, it supports an inclusive city where everyone can meet their daily needs.

Great transit is:

- *Fast* — competing favourably with driving over long distances
- *Frequent* — with minimal wait times and long service hours, providing the freedom to travel at any time
- *Reliable* — with predictable travel times that people can trust
- *Accessible* — usable by everyone, including people with mobility, visual, hearing, and cognitive impairments
- *Comfortable* — with the capacity to meet demand and allow travel with dignity
- *Complete* — linking key destinations throughout the region, with convenient and attractive connections between lines

Ridership in Vancouver has grown significantly in recent years, and new services such as the Canada Line have been met with instant success. This success has brought significant challenges however. Unlike in most North American cities, transit demand in Vancouver far exceeds capacity. Overcrowded buses routinely pass long line-ups of waiting passengers, and there are trip denials on HandiDART. To meet existing demand and support our long-term targets, more service is essential. Service optimization can help somewhat, but significant new investment is needed—and that requires new and improved funding sources.

While the City does not own or operate the transit system (TransLink is responsible for the region's transit planning and delivery), the City can support high ridership and improved, cost-effective service by building transit-supportive streets and public spaces, by protecting corridors and sites for future routes and stations, and through transit-supportive land use.

## POLICIES AT A GLANCE

### 1. Transit Network

- 1.1. Advance new and improved rapid transit
- 1.2. Advance new and improved local transit
- 1.3. Improve transit reliability and speed using transit priority measures
- 1.4. Support increased water-based transit
- 1.5. Support improved inter-regional transit

### 2. Transit-supportive Public Realm

- 2.1. Support a transit system that is easy to navigate
- 2.2. Provide easy connections and comfortable waiting areas throughout the network

### 3. Integration with Other Modes

- 3.1. Make it easy to combine cycling and transit trips (cross-reference)
- 3.2. Provide a public bicycle system (cross-reference)
- 3.3. Support improved integration with taxis (cross-reference)

### 4. Accessibility

- 4.1. Support a universally accessible transit system with a goal of equal transit outcomes for people of all incomes, ages, and abilities

### 5. Neighbourhood Impacts

- 5.1. Reduce transit-related environmental and noise emissions
- 5.2. Maintain transit streets to a high standard

### 6. Transit Financing

- 6.1. Support stable and equitable long-term transit funding sources
- 6.2. Support effective fares that encourage transit use

## POLICIES AND ACTIONS IN DETAIL

### T 1. TRANSIT NETWORK

A successful transit system has a range of services. Rapid transit is designed to run long distances at high speeds, with stops usually spaced about a kilometer apart. To maximize speed and reliability, a high degree of separation from general traffic is typically required. Local transit travels at slower speeds, with stops spaced more closely together.

#### T 1.1. Advance new and improved rapid transit

Fast, frequent, reliable, high-capacity transit is essential to attract new riders and meet mode share targets.

Encouraging more people to shift away from the private automobile requires transit that competes favourably with driving in terms of speed, convenience, comfort, and reliability.

To achieve our targets and serve future growth, significant new service is especially important for the Broadway Corridor. Host to the busiest bus route in North America, it links major regional destinations, including Central Broadway (the largest employment area in British Columbia after Downtown Vancouver) and UBC. Seamlessly connecting these critical destinations into the existing rapid transit network will provide significant benefits to both the city and the entire region.

See *Section C: Delivering the Plan* for more detail on the Broadway Corridor and other rapid transit.

##### Actions

- T 1.1.1. Work with partners to deliver an underground Millennium Line extension serving the Broadway Corridor as a top regional priority.
- T 1.1.2. Support SkyTrain station upgrades and other measures to increase system capacity, frequency, accessibility, and span of service.
- T 1.1.3. Collaborate with TransLink to provide fast, frequent, high-capacity, and fully accessible transit service on high-demand corridors including Broadway, Hastings, 41<sup>st</sup>/49<sup>th</sup> Avenue, Commercial/Victoria, and Main/Fraser.
- T 1.1.4. Protect and design for future high-capacity rapid transit corridors and potential station locations.
- T 1.1.5. Support regional transit projects outside city boundaries that demonstrate a strong business case.

#### T 1.2. Advance new and improved local transit

Local transit service is an essential part of the service spectrum, particularly for people with mobility challenges who require stops close to their destination.

##### Actions

- T 1.2.1. Work with TransLink and the Province to improve the frequency, capacity, reliability, and service span of local transit, prioritizing high-demand corridors.
- T 1.2.2. Explore wider and consistent stop spacing on local routes to attract more riders and provide faster and more frequent service, while balancing the need for local access.
- T 1.2.3. Support new or adjusted services to address transit network gaps.
- T 1.2.4. Support strategic expansion of the trolley network, including extensions as well as mid-route turnaround facilities on busy routes to improve reliability and service flexibility.
- T 1.2.5. Advance a Downtown-False Creek-Arbutus streetcar service, through measures including:
  - a. protecting rights-of-way and designing streets to accommodate the service; and
  - b. working with TransLink on a business case.

### T 1.3. Improve transit reliability and speed using transit priority measures

Transit priority measures such as bus bulges, queue jumpers, signal priority, and lane priority or reallocation can be effective ways to improve transit capacity, speed, and reliability. The City will continue to implement or pursue measures where they provide the most benefits to transit while considering impacts on other users. A creative approach is especially important in streets with limited space. In some cases, highly localized, strategic interventions may provide substantial benefit.

#### Actions

- T 1.3.1. Develop and implement transit priority measures in partnership with TransLink by:
  - a. reviewing transit reliability for different routes, identifying where and why delays are occurring;
  - b. developing guidelines regarding the application of potential transit priority measures; and
  - c. supporting and strategically implementing priority measures.
- T 1.3.2. Engage with neighbouring municipalities to ensure that transit quality improvements continue outside city limits.

### T 1.4. Support increased water-based transit

Vancouver is a city by the ocean, and opportunities exist to increase the use of our waterways for both publicly- and privately-operated transit. Ferries serving False Creek and the Fraser River could play a larger role in moving people, particularly if they were better integrated with TransLink's services.

Many older docks have steep ramps or other features that make them difficult or impossible to use by persons with disabilities, and the City is working to make new docks accessible.

#### Actions

- T 1.4.1. Replace or upgrade existing False Creek public docks to improve accessibility, and provide new docks as opportunities arise.
- T 1.4.2. Support the integration of private ferries in False Creek with public transit (for example, Compass Card integration, transit stop locations) and active transportation.
- T 1.4.3. Support new passenger ferry services on False Creek, Burrard Inlet, and/or the Fraser River where a strong business case can be made.

### T 1.5. Support improved inter-regional transit

Commercial transit providers play a key role in longer trips, particularly those that extend beyond the region's boundaries.

The City supports improved commercial and mass transit connections to centres outside the region—including Vancouver Island, Whistler, the BC interior, Seattle, Portland, and beyond. Rail infrastructure investments would improve the speed, reliability, and frequency of existing services such as the West Coast Express and Amtrak, and potentially support new routes. Improved bus, ferry, and seaplane services can also provide attractive and potentially less expensive options to driving, while supporting local tourism and business.

#### Action

- T 1.5.1. Work with TransLink as well as other government and private agencies to improve inter-regional transit services, including heavy passenger rail, ferry, coach, and air.

## **T 2. TRANSIT-SUPPORTIVE PUBLIC REALM**

Although the City does not own or operate the regional transit system, it does have significant control over its streets and rights-of-way. To that end, it plays a vital role in improving the waiting experience for transit users, promoting intermodal connectivity, and facilitating improved transit reliability through transit priority measures.

### **T 2.1. Support a transit system that is easy to navigate**

A seamless, easy-to-understand wayfinding system—including directional signage, maps, and trip-planning tools—is important to help people understand the transit network and confidently navigate between services and from place to place. The City and TransLink will continue to coordinate efforts to make the system as legible as possible.

#### **Actions**

- T 2.1.1. Continue to work with TransLink to deliver consistent and legible wayfinding at and around all rapid transit stations and major transit interchanges.
- T 2.1.2. Work with TransLink to support the provision of real-time information at transit stops, and to provide data in an open format to support third-party mobile application development.

### **T 2.2. Provide easy connections and comfortable waiting areas throughout the network**

The City can improve transit service levels by facilitating clear and easy connections between services, and by making waiting areas as comfortable as possible.

Special attention to the connection function is particularly critical at regionally significant interchanges with high volumes of boardings and transfers, for example, the station areas around Waterfront, Main Street, Commercial-Broadway, and Broadway-City Hall. Here, small design choices can have large impacts on the usefulness and versatility of transit. These places may also provide special opportunities to incorporate connecting passengers into an active and interesting public realm.

Transit stations themselves should be designed to facilitate movement for persons of all ages and abilities, including those with bicycles or other mobility aids, through clear signage, stairway runnels, accessible fare gates, and large elevators with direct, simple, and quick paths to platforms and parking.

At street-level intersections serving as major transfer points, it may be possible to improve connections through signalization, pedestrian paths, signage, and waiting areas. Even basic stops can be made more pleasant with amenities like weather protection, seating, waste bins, signage, and lighting.

#### **Actions**

- T 2.2.1. Ensure transit interchanges are designed to facilitate easy and legible connections for people of all ages and abilities, including those with bicycles or mobility aids.
- T 2.2.2. Explore opportunities to improve transit connections at major stations through redevelopment.
- T 2.2.3. Provide safe and comfortable waiting areas at all bus stops where sufficient sidewalk and boulevard space exists. In locations where sidewalk space is too limited for a full shelter, pursue opportunities to locate amenities on private property.

## **T 3. INTEGRATION WITH OTHER MODES**

Bicycles and transit make for a powerful combination. Cycling is an inexpensive way to extend the catchment area of transit, but measures need to be taken to address concerns of safety and theft. See the *Cycling* section for specific policies and actions on integrating cycling with transit.

Car-sharing and taxi services can also extend the transit system. See the *Motor Vehicles* section for specific policies and actions on these topics.

## **T 4. ACCESSIBILITY**

An effective transit system is accessible and affordable to people of all ages and abilities. Applying principles of universal design to the entire transit system—including vehicles, stations, and waiting areas—ensures the widest range of users are able to use it, and reduces the need for more expensive specialized services. For persons with limited mobility, local routes with stops located close to destinations and paratransit services like HandyDART will continue to be important parts of the transit service spectrum.

### **T 4.1. Support a universally accessible transit system with a goal of equal transit outcomes for people of all incomes, ages, and abilities**

Transit is especially important for persons with mobility and vision challenges, and for whom other modes of transportation are less viable. A universally accessible transit system provides mobility and freedom that enables every resident to meet their daily needs and participate in civic life. TransLink has made great strides in recent years, and now features a 100% accessible vehicle fleet. Currently about 80% of the approximately 2000 bus stops in the city are considered accessible.

#### **Actions**

- T 4.1.1. Provide accessible waiting and boarding areas at all transit stops, prioritizing improvements at high-demand locations and stops with higher usage by persons with disabilities.
- T 4.1.2. Ensure transit stations are designed to facilitate movement for persons with bicycles and mobility aids, for example through clear signage, stairway runnels, accessible fare gates, and large elevators with direct, simple, and quick paths to platforms and parking.
- T 4.1.3. Support alternative delivery mechanisms for paratransit services—including potential increased use of taxis—to lower per-ride costs, improve reliability, and reduce booking times.
- T 4.1.4. Require taxi driver education, training, and testing to ensure safe and sensitive service for customers with disabilities.

## **T 5. NEIGHBOURHOOD IMPACTS**

While the efficiency, abundance, and attractiveness of transit is essential to the city's economy and livability, efforts should be made to mitigate negative impacts on neighbourhoods.

### **T 5.1. Reduce transit-related environmental and noise emissions**

Noise, vibration, and air pollution associated with diesel buses are legitimate concerns for residents and businesses along major transit corridors. Mitigating these impacts is important to maintaining the livability of Vancouver's neighbourhoods, particularly as the City aims to focus more density and jobs in close proximity to transit. Reducing transit-related emissions will also contribute to realizing Greenest City goals to eliminate dependence on fossil fuels and breathe the cleanest air of any major city in the world.

#### **Actions**

- T 5.1.1. Support specifications for new transit vehicles that reduce noise, vibration, and localized emissions.
- T 5.1.2. Support an expanded trolley network.

## **T 5.2. Maintain transit streets to a high standard**

Buses are heavy, especially when filled to capacity, resulting in significant wear-and-tear on city streets. They are also exempt from weight restrictions that apply to other large commercial vehicles. Maintaining roads on busy transit routes requires additional investment as a result. TransLink currently shares the cost of maintenance for streets that are part of the regional Major Road Network.

### **Actions**

- T 5.2.1. Continue to prioritize maintenance on high-volume bus corridors, and install concrete pads at bus stops to prevent rutting in the pavement.
- T 5.2.2. Consider high-volume bus routes when reviewing potential additions to the Major Road Network.

## **T 6. TRANSIT FINANCING**

The regional transit system faces major funding challenges. Sufficient and stable funding is required to provide the service needed to meet existing and future transit demands. Without new sources of funding, it will be difficult to maintain existing levels of service, let alone meet future targets or serve latent demand.

Particular hardship results from heavy reliance on a per-litre fuel tax, which accounts for just under 30% of TransLink's total revenue. Revenues are declining as people drive less and vehicles become more efficient, and, at the same time, operational costs are increasing as fuel prices rise and new services are required.

In 2010, the Livable Cities agreement between the Province of BC and the Mayors' Council on Regional Transportation recognized the limitations of existing sources—such as property taxes, the current vehicle fuel tax, and transit fares—and began a collaborative process to develop a long-term sustainable funding strategy.

### **T 6.1. Support stable and equitable long-term transit funding sources**

To continue existing operations and fund new transit initiatives, ranging from expanding the bus fleet to advancing new rapid transit projects, partnerships are required between senior governments, TransLink, Metro Vancouver, the City, and other municipal governments in the region.

Various new funding tools have been identified, some of which require enabling legislation at the provincial level. To date, the City has supported increases to the regional fuel tax, a transportation carbon tax, a vehicle registration fee, and road pricing as preferable alternatives to raising property taxes.

It is also worth examining how development could help fund rapid transit projects, since rapid transit tends to increase land values and development activity. The City already uses development charges to help pay for many important community amenities such as the community centres and parks that make higher density neighbourhoods livable and attractive. Similarly, rapid transit is a public good and a community amenity that enhances sustainable mobility and reduces household costs.

### **Actions**

- T 6.1.1. Continue working with funding partners to expand stable, equitable funding sources to meet transit demand and achieve ridership goals. Potential sources include (but are not limited to):
  - a. increased fuel taxes;
  - b. a regional carbon tax;
  - c. vehicle registration fees; and
  - d. regional road pricing.

Favour options that do not increase property taxes and that encourage sustainable modes.



- T 6.1.2. Explore how development can be used to help pay for rapid transit projects, while recognizing the need for other public amenities that are also required with increased densities.

## **T 6.2. Support effective fares that encourage transit use**

While fares are an important part of TransLink's revenue stream, they do not—and should not be expected to—cover all costs of transit. Transit provides numerous benefits to society, enabling growth in economic activity without contributing to congestion, meeting important social service needs, and supporting the development of more compact and sustainable communities. By allowing for lower fares and higher ridership, public funds facilitate these and other benefits.

Fare structures should generate a reasonable amount of revenue while imposing a minimum of delay, hassle, and confusion to users. Prices should be set to encourage sustainable transportation choices, and measures put in place to ensure everyone can access the system.

TransLink's implementation of a smartcard system (called Compass Card) across the region in 2013 will allow for innovative new fare structures that generate needed revenue while increasing equity and incentivizing sustainable transportation choices. Potential approaches could incorporate a mixture of distance- and time-based elements, provide discount fares in off-peak periods with spare capacity, and dramatically increase user convenience.

### **Actions**

- T 6.2.1. Support fare structures that encourage sustainable transportation behaviour and are simple for the customer to understand, with measures in place to ensure everyone can access the system.
- T 6.2.2. Support fare options that encourage transit use by families and visitors.
- T 6.2.3. Encourage bundling of transit fares into the ticket cost of major events.
- T 6.2.4. Support integrating the Compass Card system with other forms of transportation, including bike sharing, car sharing, parking payment, private ferry services, and taxis.

## MOTOR VEHICLES

*Manage the road network efficiently to improve safety and support a gradual reduction in car dependence. Make it easier to drive less. Accelerate the shift to low-carbon vehicles.*

### BACKGROUND STORY

Private automobiles will continue play an important role in Vancouver for the foreseeable future. This plan aims to make roads as safe and operationally efficient as possible. At the same time, it supports a gradual transition to fewer car trips. We know the number of people living, working, and visiting the city is continuing to grow. This means more trips on finite road space—trips that cannot be accommodated by driving. We have made great progress in recent years, with motor vehicle volumes into the city and downtown declining despite significant growth in overall travel.

The City's challenge is to maintain this trend, continuing to accommodate the trips that need to be made by automobile while encouraging a shift towards more sustainable modes and improving overall quality of life. There are many benefits to this approach:

- By shifting some trips to other modes, more space is created for cars and trucks that *do* need to be on the road—for goods movement, services and deliveries, and emergency response, for example.
- By providing options that reduce the need to drive or own a car, we can help residents save thousands of dollars each year—money that can be spent on housing or in the local economy.
- By improving safety, we can reduce the number and severity of injuries and fatalities for all modes. The vast majority of traffic collisions resulting in serious injury or death involve at least one motor vehicle.

Since private automobiles are not going to disappear anytime soon, it is important to support the shift to low-emission vehicles in order to meet our long-term air quality and emissions targets.

## POLICIES AT A GLANCE

### 1. Road Network

- 1.1. Optimize network operations to manage congestion impacts
- 1.2. Consider impacts to transit, commercial vehicles, and general traffic flow prior to reallocating road space
- 1.3. Manage traffic to improve safety and neighbourhood livability

### 2. Parking

- 2.1. Use off-street parking requirements to support reduced auto ownership and use
- 2.2. Support strategies that reduce the need for parking
- 2.3. Separate parking and housing costs to increase housing affordability
- 2.4. Approach parking as a shared district resource
- 2.5. Design parking to be flexible and adaptable
- 2.6. Make it easier for drivers to find available parking spaces
- 2.7. Manage parking in neighbourhoods
- 2.8. Provide accessible parking for persons with disabilities
- 2.9. Support cycling, low-carbon vehicles, and car sharing (cross-reference)
- 2.10. Support efficient loading and servicing (cross-reference)

### 3. Car Sharing

- 3.1. Support increased car sharing

### 4. Other Demand Management Tools

- 4.1. Support transportation demand programs that are employer-, institutional-, and district-based
- 4.2. Support regional road or congestion pricing, with revenue directed towards sustainable transportation improvements
- 4.3. Support insurance options that reward drivers for driving less

### 5. Low-Carbon Vehicles

- 5.1. Provide charging infrastructure to support electric vehicles
- 5.2. Support early deployment of low-carbon and electric vehicles

### 6. Taxis

- 6.1. Support improved taxi service
- 6.2. Support safe use of taxis for persons with disabilities

## POLICIES AND ACTIONS IN DETAIL

### M 1. ROAD NETWORK

Vancouver’s relatively fine-grain street network provides many benefits. It results in fairly direct travel routes, minimizing overall trip distances. It also provides greater flexibility to close or modify portions of routes—to host street celebrations or festivals, for example—since parallel routes are usually close by.

Although the City’s previous transportation plan committed to not expanding road space to accommodate additional growth, this plan goes even further. As the number of residents, employees, and visitors continues to grow, the number of trips and street activities will also rise. Accommodating this growth will require reallocation of road space to improve the efficiency of existing rights-of-way.

#### M 1.1. Optimize network operations to manage congestion impacts

Motor vehicles will continue to be a significant part of the transportation system for the foreseeable future. Coordinating signal timing, managing turn movements, and carefully monitoring traffic volumes are important components to managing congestion. At the same time, measures to facilitate motor vehicle movement should not come at the expense of safety—particularly for vulnerable road users—or adversely affect transit reliability or goods movement.

##### Action

- M 1.1.1. Continue to optimize network operations such as signal timings and rush-hour parking regulations to manage congestion while supporting other plan goals.

#### M 1.2. Consider impacts to transit, commercial vehicles, and general traffic flow prior to reallocating road space

Although walking and cycling are top priorities for the City, the needs of all road users must also be considered when allocating road space. In particular, transit and truck routes play an essential role in the city, moving thousands of people and enabling goods and services to be delivered in a timely manner. Accordingly, measures to improve conditions for walking and cycling on these routes should include careful assessments to determine potential impacts to transit and goods and services movement. Impacts to general motor vehicle traffic should also be considered, including the potential for drivers to shift to other modes or use alternate routes.

Some streets require an additional level of consideration because they serve as important transit and/or truck routes, or because they handle a particularly high volume of motor vehicle traffic on relatively limited space. Many of these streets are identified as part of the Major Road Network (MRN), and are co-managed by the City and TransLink.

See *Section C: Delivering the Plan* for more detail on the Major Road Network.

##### Actions

- M 1.2.1. Monitor vehicle volumes to understand traffic trends and potential spare capacity. Where improvements to the walking and/or cycling environments are needed but the ability to reallocate road space is limited, consider alternative approaches such as property acquisition or building setbacks.
- M 1.2.2. Work with TransLink to secure strategic additions to the regional Major Road Network such as (but not limited to): Burrard Street from Broadway to Georgia Street; Powell Street (and Cordova) between Main Street and Nanaimo Street; and any changes related to the Georgia and Dunsmuir Viaducts.

### M 1.3. Manage traffic to improve safety and neighbourhood livability

Vancouver's grid of streets provides a multitude of routes for drivers as well as people on foot and bicycles. When delays occur on the arterial network, some drivers will shortcut through local streets, and speeds and volumes can raise safety and livability concerns for residents. Traffic calming and diversion tactics can be effective countermeasures, but with limited resources, priorities will be given to areas with high pedestrian volumes and demonstrated problems.

In some parts of the city, existing road designs encourage speeding and negatively impact community livability. Bridgeheads in particular are often problematic, especially those with freeway-style ramps that make pedestrian and cycling connections difficult. The City will explore ways to improve these areas. In locations where infrastructure is managed by other jurisdictions, such as bridges that connect the city to adjacent municipalities, the City will advocate to ensure that upgrades and replacement infrastructure do not increase general motor vehicle capacity.

#### Actions

- M 1.3.1. Continue to implement strategic traffic calming on local streets to improve safety and neighbourhood livability by:
  - a. prioritizing measures around neighbourhood bike routes, schools and other key pedestrian generators;
  - b. considering a street's function in the broader transportation network when determining the degree and type of traffic calming;
  - c. considering neighbourhood access issues prior to implementing diversion measures on local streets with high traffic volumes (>2500 vehicles per day); and
  - d. ensuring neighbourhood access for emergency responders.
- M 1.3.2. Refine the traffic calming evaluation process to encourage broad resident discussion and support prior to request submission.
- M 1.3.3. Explore opportunities to normalize bridge ramps and arterial intersections that have highway-style loops, odd angles, slip lanes, or other features that create a hostile pedestrian environment.
- M 1.3.4. Work with other jurisdictions to implement neighbourhood-friendly designs on bridges and roads that connect to the city. Ensure that upgrades and replacement infrastructure do not increase capacity for general motor vehicle traffic.
- M 1.3.5. Continue to monitor collision rates across the city, and address locations with a high number of incidents.

## M 2. PARKING

Parking is one of the City's biggest opportunities to effect change. Parking policies influence travel choice, affect housing and business costs, and significantly shape the public realm. Too much surface parking creates a hostile environment that is unpleasant to walk or cycle in, and underpriced parking can contribute to congestion problems and reduce neighbourhood livability. Appropriately priced parking encourages turnover in retail areas, thereby supporting local economic activity.

This plan includes a number of directions related to parking supply, management, and design. They address a broad range of interconnected elements, including residential and meter parking, off-street requirements, demand management strategies, and parkade management. They are intended to complement and support each other, and will be delivered as part of a comprehensive parking strategy.

See *Section C: Delivering the Plan* for more detail on comprehensive parking reform.

### **M 2.1. Use off-street parking requirements to support reduced auto ownership and use**

Parking adds a significant expense to development, particularly when it means additional levels of underground parking that go unused. These costs are passed on to homeowners and renters, as well as businesses and customers. One way to address this is to build less parking per unit of floor space. Reducing or eliminating parking requirements can reduce housing or lease costs while encouraging more sustainable transportation choices and contributing to a more vibrant, walking-friendly public realm. Parking maximums are also important since they eliminate the risk that developers will build parking in excess of City objectives.

#### **Actions**

- M 2.1.1. Develop and implement a strategy to: (a) eliminate minimum parking requirements downtown, near rapid transit stations, and for guaranteed rental residential developments, and (b) revise minimum requirements elsewhere based on target mode shares.
- M 2.1.2. Introduce parking maximum allowances throughout the city based upon current ownership levels or existing mode share.

### **M 2.2. Support strategies that reduce the need for parking**

Before determining how many parking spaces to build, developers should make every effort to minimize the need for parking spaces by implementing strategies that reduce the need to drive. Integrating transportation demand management strategies into new development at the outset reduces the demand for parking while supporting more sustainable transportation choices and making more income available for housing. Potential strategies could include on-site car sharing, enhanced walking and cycling facilities, occupant transit pass programs, location-based mortgages, and occupancy agreements.

#### **Actions**

- M 2.2.1. Clarify the parking bylaw to reflect broader City transportation objectives and to actively encourage strategies that reduce parking demand.
- M 2.2.2. Require demand management plans in all rezonings, multi-family, office, and mixed-use developments. Encourage demand management strategies in all other developments and allow staff to reduce minimum parking requirements in response.
- M 2.2.3. Monitor the impacts of demand management plans and use the results to improve effectiveness and revise policies as appropriate.
- M 2.2.4. Create a developer-friendly, Council-endorsed toolkit to assist developers and staff in developing transportation management strategies for new development.

### **M 2.3. Separate parking and housing costs to increase housing affordability**

Allowing people to purchase or rent housing and parking separately can mean significant savings for households choosing to go car-lite or car-free. Firstly, it directly reduces the cost of a home: a single underground parking space can add \$40,000 to \$50,000 to the cost of a home, or upwards of \$200-\$250 in monthly mortgage payments at current rates. Secondly, by making a hidden cost of driving explicit, it creates a greater incentive not to own a vehicle, thereby increasing the likelihood that someone will forgo car ownership and choose other modes of transportation. Residents who choose to go this route can apply the resulting savings—amounting to \$10,000 or more per year—to housing. In effect, more money is available to spend on housing that costs less. Lastly, it provides greater choice in the housing market.

The City has already supported projects that have voluntarily unbundled parking from housing costs, including the Spectrum and Capitol Residences. Other local examples include SFU's UniverCity (Burnaby), and the Dockside Green development (Victoria). Parking requirements in these projects were reduced as part of their development strategy. In other major cities, such as Brooklyn, NY, and Washington, DC, the unbundling or separating of parking from other costs is a common practice. The City of San Francisco began requiring unbundled parking in new multi-family developments with 10 units or more in denser neighbourhoods.

#### **Actions**

- M 2.3.1. Continue to encourage the unbundling of parking costs from housing costs throughout the city, by offering a reduction from the minimum parking requirement, for example.
- M 2.3.2. Consider requiring unbundled parking costs as a condition of approval for multi-family, mixed-use, and rental developments in the downtown and near rapid transit stations.

### **M 2.4. Approach parking as a shared district resource**

Approaching parking as a shared neighbourhood resource, rather than attaching it to individual buildings, is a common practice in many cities and has many benefits. It enables adjacent developments that generate parking demand at different times of day to share the same spaces rather than each providing their own purpose-built ones. It also transforms underused existing parking into a resource that new developments nearby can tap into, thereby increasing overall efficiency. Finally, it helps to alleviate concerns around unbundling, since residents who choose to own a car later on can lease a space nearby, and developers can lease excess spaces to non-occupants. This practice is already in place for some heritage properties and could be expanded.

The City's existing downtown parking lots are resources that require careful consideration. In recent years, the number of motor vehicles entering downtown Vancouver has declined, even as total trips and activity have grown. This has been accompanied by a reduction in public parking use; most City-owned lots are less than half full, even at noon which is usually the busiest time. On one hand, half-empty lots suggest that redeveloping some lots for other uses may be appropriate. On the other hand, they may become increasingly valuable as district parking resources, in conjunction with complementary policies that reduce private or on-street parking supply.

#### **Actions**

- M 2.4.1. Develop and implement design guidelines for larger developments to enable non-occupant parking access (for example, mechanical parking, multiple levels of security).
- M 2.4.2. Consider requiring parking in larger developments to be publicly accessible, to enable use as a shared resource.
- M 2.4.3. Allow and encourage developers to lease parking spaces off-site instead of providing new spaces, to take advantage of nearby parking oversupply.
- M 2.4.4. Develop a long-term strategy for Downtown parking, considering total parking supply, future demands, and other potential uses.

### **M 2.5. Design parking to be flexible and adaptable**

Parking spaces in new buildings should be "future-proofed" so that they can be converted to other uses such as storage, bicycle parking, or even living space when they are no longer needed for parking cars. The City will make it easier to convert unused spaces in older buildings with a demonstrated oversupply.

This plan recognizes the importance of curb space as a significant public resource, especially where demand for right-of-way is highest. On-street parking should be approached as a flexible resource that is integrated into a pedestrian-friendly public realm.



**Actions**

- M 2.5.1. Modify codes and policy and encourage flexible design so that parking spaces can be converted to other uses (for example, living space, bicycle parking, or storage) in the future as demand changes.
- M 2.5.2. Develop retrofit policies for existing buildings with excess parking to enable conversion to other uses.
- M 2.5.3. Remove peak-period parking restrictions where possible to enable more flexible use of the curb lane, including:
  - a. widening sidewalks at pinch points and other congested areas, as well as shortening crossings and improving visibility at intersections;
  - b. creating space for street furniture such as bus stops or bike parking;
  - c. creating opportunities for patios and parklets; and
  - d. providing full-time curb parking to serve local businesses.

**M 2.6. Make it easier for drivers to find available parking spaces**

A lot of traffic is the result of drivers cruising around in search of an available parking space, which accounts for up to 40% of traffic in parts of some cities. The City can reduce congestion, support local business, and increase customer convenience by providing drivers with better information on available spaces, and by setting prices to ensure a limited number of on-street spaces are always available. New and emerging technologies will continue to make this easier.

**Actions**

- M 2.6.1. Provide real-time availability information for City-owned off-street parking, through electronic signage and mobile device applications.
- M 2.6.2. Manage curb space with variable or performance pricing strategies, ensuring on-street space availability and reducing traffic caused by drivers searching for available parking.

**M 2.7. Manage parking in neighbourhoods**

Curb space on residential streets is often in high demand, and it can be difficult for visitors to find parking spaces. In this context, some residents oppose reduced parking requirements for new development nearby because they assume new residents will simply park on the street rather than reduce car ownership. Although there is strong evidence that providing less off-street parking reduces car ownership, particularly when demand management strategies are used, this is a legitimate concern.

Part of the problem is that curb space is often unregulated and, where permit programs do exist, it is undervalued. As a result, many residents park on the street even when off-street parking is readily available. Fewer spaces are available for visitors, and there is a perceived shortage. A thoughtful approach to neighbourhood parking can address these concerns and result in more efficient use of road space. This could allow some on-street parking to be converted to other uses such as wider sidewalks, public space, or improved cycling facilities, and even generate revenue that can be directed towards local amenities.

### Action

- M 2.7.1. Review, adjust, and monitor the residential parking permit program to address parking spillover concerns associated with off-street reductions and to better reflect the high value of street space. Possible approaches include:
- a. gradually increasing permit costs to reflect market value;
  - b. limiting the number of permits per household;
  - c. increasing costs for each additional permit per household;
  - d. capping the total number of permits and allowing residents to trade rights; and/or
  - e. piloting a neighbourhood parking benefit district, where permit costs are increased and a portion of the revenue is directed towards local improvements such as sidewalks, lighting, and nearby amenities.

## M 2.8. Provide accessible parking for persons with disabilities

Persons with disabilities who are able to drive often cannot travel far from a parking space, so it is particularly important that spaces be located close to key destinations. Specially designated disability spaces should be designed to accommodate the specific needs of people who rely on mobility aids, and to ensure ease of loading and unloading.

### Action

- M 2.8.1. Continue to provide parking for persons with disabilities, through measures including:
- a. three-hour access to Residential Permit Parking and Resident Parking Only zones;
  - b. thirty-minute access to Regular Loading, Passenger, and No Parking zones, for use while actively loading and unloading persons or materials; and
  - c. provision of Disability Zones, implemented in locations based upon requests from people with disabilities.

## M 2.9. Support cycling, low-carbon vehicles, and car-sharing

Parking policies play an important role in supporting cycling, low-carbon vehicles, and car-sharing. These areas are addressed elsewhere in the plan. For cycling-related parking strategies, see *Cycling 2.1*. Car sharing and low-carbon vehicle parking strategies are covered later in this section.

## M 2.10. Support efficient loading and servicing

Parking plays a key role in the delivery of goods and services. This plan includes a number of actions to support efficient loading and servicing. For details, see the *Goods, Services, and Emergency Response* section.

### **M 3. CAR SHARING**

Car sharing is a system whereby a fleet of communal vehicles is available in convenient locations to registered members. Members typically pay a nominal monthly administrative fee to cover some of the fixed costs, but most usage costs are paid on a per-kilometre and/or per-hour basis. Car sharing makes it easier to go car-lite or car-free, helping members save money while still having access to a car when they really need one. Car sharing also provides members with flexibility, since they can access different types of vehicles depending on need.

Car sharing reduces the number of cars on the road, freeing up road space for other uses. Surveys indicate that more than one in five car-share members give up a car, and more than three in ten avoid buying a car altogether. One shared vehicle typically replaces up to 20 personally owned vehicles.

#### **M 3.1. Support increased car sharing**

Vancouver is a North American car-sharing leader, with three organizations currently serving Greater Vancouver, and over 700 shared cars distributed throughout the region. Currently, the City supports car sharing by allowing developers to replace five parking spaces with one car-share space in some new developments, and by reserving some on-street parking spaces.

The City is also supportive of peer-to-peer car sharing, where an existing car owner makes their personal vehicle available for others to rent for short periods of time.

##### **Actions**

- M 3.1.1. Expand requirements and incentives for car sharing in new developments.
- M 3.1.2. Continue to make priority on-street locations available for car sharing.
- M 3.1.3. Adopt parking design guidelines for larger developments that enable non-residents to access on-site car-sharing vehicles.
- M 3.1.4. Support legislative and technological advances that facilitate peer-to-peer car sharing.

### **M 4. OTHER DEMAND MANAGEMENT TOOLS**

Minimizing unnecessary driving trips reduces automobile congestion and improves traffic flow for transit, goods and services in the process. Many of the directions contained in this plan are effectively “demand management” strategies, since they make alternatives to driving more appealing.

#### **M 4.1. Support transportation demand programs that are employer-, institutional-, and district-based**

Transportation Demand Management (TDM) programs are a way for businesses and other institutions to encourage reduced driving in a comprehensive manner. They employ multiple strategies that are complementary and coordinated, and typically include initiatives to expand travel choice as well as incentives to reduce automobile travel. A clear mandate, ongoing institutional support, effective marketing, and a commitment to monitoring results are important parts of most successful TDM programs.

In recent years, the City has demonstrated leadership by implementing a coordinated program encouraging City Hall campus employees to reduce automobile trips. Measures include charging for staff parking, and using the revenue to provide transit pass discounts and active transportation incentives. Active transportation end-of-trip facilities have also been significantly improved. The City will continue to show corporate leadership and support initiatives by other groups and organizations. Although TDM programs are typically established by large companies and institutions, creative approaches could facilitate programs on a smaller scale, for example through business improvement associations or strata councils.

### **Actions**

- M 4.1.1. Support programs that help large employers, institutions, strata councils, business improvement associations, and others develop strategies to reduce motor vehicle trips and encourage trips by walking, cycling, and transit.
- M 4.1.2. Demonstrate leadership by providing a transportation demand management program to all City employees and at civic facilities and by sharing strategies and results with others.
- M 4.1.3. Encourage a BIA-led pilot to enable small businesses to share resources in developing a district TDM program.
- M 4.1.4. Support programs such as TransLink's TravelSmart that provide personalized travel advice and support to residents, schools, and workplaces.

### **M 4.2. Support regional road or congestion pricing, with revenue directed towards sustainable transportation improvements**

Some cities have implemented system-wide road pricing to reduce general automobile congestion, improve traffic flow for transit, goods and services, and help pay for transit or other sustainable transportation improvements. The City is supportive of this approach for the Metro Vancouver region, provided it is done in an equitable manner and achieves substantial transit capacity improvements.

#### **Action**

- M 4.2.1. Advocate for regional road pricing to reduce congestion and help fund transit and other sustainable transportation improvements. Contribute to the study and evaluation of alternatives.

### **M 4.3. Support insurance options that reward drivers for driving less**

Automobile insurance in BC is currently a fixed, sunk cost for drivers. Since the price of insurance does not vary with the amount driven, motorists have an incentive to drive more in order to “get their money’s worth.” Pay-as-you-drive (PAYD) is a distance-based approach to auto insurance premiums, whereby drivers pay less when they drive less to account for lower exposure to crashes. Researchers estimate that it could reduce average annual mileage by 5—15% in BC, and reduce traffic-related casualties by 12—15%.

#### **Action**

- M 4.3.1. Support a pilot program for pay-as-you-drive or distance-based insurance premiums.

## **M 5. LOW-CARBON VEHICLES**

Even with an increase in walking, cycling, and transit, there will still be cars on the road for the foreseeable future. Widespread adoption of low- and zero-emission vehicles will be critical to meeting our greenhouse gas reduction targets, and to ensuring a cleaner, greener future. The City will support and build upon the actions established through its participation in Project Get Ready, a multi-stakeholder non-profit initiative to facilitate the uptake of low-carbon vehicle technologies.

### **M 5.1. Provide charging infrastructure to support electric vehicles**

Convenient charging infrastructure must be in place for electric vehicles to become a practical alternative to conventional automobiles.

**Actions**

- M 5.1.1. Continue to require all new developments to include electric vehicle charging infrastructure.
- M 5.1.2. Develop a retrofit policy to facilitate charging infrastructure in existing buildings.
- M 5.1.3. Partner with private industry to provide charging locations throughout the city, including retail locations, existing parking lots, and other under-utilized land.

**M 5.2. Support early deployment of low-carbon and electric vehicles**

The City will continue to demonstrate leadership by encouraging the uptake of low-carbon vehicles in car-sharing programs, and by integrating electric vehicles into its own operations where practical. E-bikes and scooters could also play a larger role in the future transportation mix.

**Actions**

- M 5.2.1. Support the adoption of low-carbon and electric vehicle technology for car-share vehicles.
- M 5.2.2. Convert the City's own fleet to electric, hybrid, or fuel cell vehicles, as feasible.
- M 5.2.3. Create opportunities for low-carbon vehicles, including electric scooters, to park in the city.

**M 6. TAXIS**

Taxis are an important part of the transportation system for both residents and visitors. By providing a flexible alternative when walking, cycling, and public transit are not options, they help to fill a gap and reduce dependency on the private automobile.

In British Columbia, the role of regulating taxis is shared between the provincial government and local municipalities.

The provincial Passenger Transportation Board (PTB) controls the number of taxi licenses based on service demand in each region. The licensing process is application-driven, and the PTB does not carry out any transportation planning or demand assessments of its own.

The City regulates taxi companies through the Vehicles for Hire bylaw and sets requirements for vehicle age and condition, driver licensing and identification and vehicle inspections. The City may issue taxi licenses to companies only if the PTB has first issued licenses allowing taxis to operate in Vancouver. City staff inspects taxis to ensure passenger safety, accuracy of meters, and a high level of vehicle cleanliness and maintenance.

**M 6.1. Support improved taxi service**

Taxis help reduce dependency on the private automobile by providing a flexible alternative when walking, cycling, and transit are not viable options. The City supports giving taxis priority over general traffic provided it does not hinder public transit service or compromise public safety.

The Taxi Roundtable includes representatives of the taxi industry, Passenger Transportation Board, Tourism Vancouver, Justice Institute, and the City of Vancouver and has been meeting since 2006 to address taxi-related issues and explore options to improve service.

**Actions**

- M 6.1.1. Pilot and evaluate a program that allows taxis to travel in bus lanes.
- M 6.1.2. Continue to facilitate taxi loading and unloading at high-demand locations.
- M 6.1.3. Support incorporating taxis into TransLink's Compass Card system.

- M 6.1.4. Through the Vancouver Taxi Roundtable, continue working with partners to improve taxi services by:
- a. exploring measures such as low-carbon vehicles, bike racks, fleet optimization, centralized dispatch systems, use of GPS and other technologies, ride sharing, and flat-rate fares for certain trips;
  - b. encouraging the Ministry of Transportation and Infrastructure and Passenger Transportation Board to implement innovative service improvements;
  - c. supporting the development of a province-wide taxi service data collection and monitoring system; and
  - d. streamlining taxi regulations and developing a more comprehensive approach to regional service planning.

## **M 6.2. Support safe use of taxis for persons with disabilities**

Conventional transit service is not always an option for some persons with disabilities, and HandyDart service can be impractical when trips need to be made on short notice. Taxis fill an important gap, providing a flexible service with potentially reduced operational costs. TransLink already uses taxis for limited paratransit service through its TaxiSaver Program, and opportunities may exist to expand this program. See the *Transit* section for additional policies and actions on transit accessibility.

### **Action**

- M 6.2.1. Require taxi driver education, training, and testing to ensure safe and sensitive service for customers with disabilities.

## GOODS, SERVICES, AND EMERGENCY RESPONSE

*Support a thriving economy and Vancouver's role as a major port and Asia-Pacific gateway while managing related environmental and neighbourhood impacts. Maintain effective emergency response times for police, fire, and ambulance.*

### BACKGROUND STORY

The efficient movement of goods and services is critical to city, regional, and even national well-being.

At one end of the spectrum, Vancouver plays a vital role as a port city and Canada's premier Asia-Pacific gateway. Port Metro Vancouver moves \$75 billion worth of goods each year to around 160 countries, supporting almost 20,000 jobs in the city, and around 130,000 jobs across Canada. By 2030, container volumes are expected to increase by 70% for the two terminals within city boundaries. The Vancouver International Airport is also seeing significant growth in all sectors.

At the other end of the spectrum, smaller-scale local movements and deliveries are key parts of a thriving local economy and high quality of life. As the number of people living and working in the city continues to grow, the volumes of goods and service vehicles will also increase. The City can have an influence on this level of goods movement by advocating for low-impact vehicles, and by managing on- and off-street loading spaces to ensure easy access to homes and businesses. Vancouver is a worldwide tourist destination, and supporting visitors who travel by air, cruise ships, and tour buses is also important.

As our city continues to grow, patterns of production and distribution are changing, and not always in predictable ways. Changes in global supply chains—such as the opening of a new port in Asia, or port expansion in Vancouver or Prince Rupert or California—can have implications locally. So can the price of fuel, or an increase in local food production. By emphasizing strategies that reduce oil dependence and support production within the region, this plan will help local businesses succeed in a post-carbon era.

Emergency services need special consideration. It is critical that police, fire, ambulance, and other emergency providers can reach their destinations in a timely fashion. At the same time, efforts to minimize response times should not come at the expense of traffic calming and other measures intended to reduce crashes and increase safety.

### POLICIES AT A GLANCE

#### 1. Regional-and-Beyond Goods and Services Movement

- 1.1. Protect and improve rail corridors for goods and passenger movement
- 1.2. Support truck movement on key regional routes
- 1.3. Support Port Metro Vancouver efforts to reduce port-related environmental and traffic impacts
- 1.4. Support Vancouver International Airport as British Columbia's primary air gateway

#### 2. Local Goods and Services Movement

- 2.1. Maintain an efficient network of designated truck routes
- 2.2. Provide for efficient loading and unloading
- 2.3. Support low-impact goods and services movement and delivery
- 2.4. Support local production and distribution to reduce the need for large-scale transport

#### 3. Emergency Response

- 3.1. Consider emergency vehicle access in street designs and traffic calming measures
- 3.2. Provide up-to-date, readily accessible information on traffic calming measures and closures



## POLICIES AND ACTIONS IN DETAIL

### **G 1. REGIONAL-AND-BEYOND GOODS AND SERVICES MOVEMENT**

Vancouver is a port city and Canada's premier Asia-Pacific gateway. Large-scale, high-volume, long-distance goods and services movement plays an important role in the provincial and national economy, and will continue to be a high priority for the city.

#### **G 1.1. Protect and improve rail corridors for goods and passenger movement**

Rail is the most efficient and environmentally friendly way to move goods and people over land for long distances, but infrastructure bottlenecks limit both reliability and the potential for modal shift. The City will protect existing rail corridors and support measures to increase local and regional rail capacity and reliability. Grade separation strategies for rail should be seen as opportunities to improve walking and cycling route connectivity, particularly in the False Creek Flats area.

See *Section C: Delivering the Plan* for more detail on rail corridors.

##### **Actions**

- G 1.1.1. Implement the False Creek Flats Rail Corridor Strategy, subject to refinement based on the Eastern Core Strategy and updated plan directions for walking, cycling, and neighbourhood circulation.
- G 1.1.2. Develop and implement long-term rail corridor strategies to increase capacity and reliability for False Creek Flats, the Grandview Cut, and the north shore of the Fraser River.
- G 1.1.3. Advocate for improvements to the regional rail network to address major bottlenecks such as the New Westminster Rail Bridge.

#### **G 1.2. Support truck movement on key regional routes**

Truck routes that directly serve the Port or are part of the region's Major Road Network are especially important to the regional and national economies. The City will strive to ensure these routes are as efficient for truck movement as possible, without compromising safety for pedestrians and other road users.

##### **Actions**

- G 1.2.1. Advocate for the Port to re-open Clark Drive as the primary north-south access point for Port facilities, and to maintain McGill Avenue as the primary eastern access point.
- G 1.2.2. Continue to work with the Port, TransLink, and other partners to maintain efficient goods movement on Major Road Network truck routes, and to plan for future growth.

#### **G 1.3. Support Port Metro Vancouver efforts to reduce port-related environmental and traffic impacts**

Many of the biggest opportunities to reduce Port-related environmental and traffic impacts lie within the Port's jurisdiction. The City will support Port Metro Vancouver efforts in this regard, including: using shore power for berthed vessels; exploring short-sea shipping as an alternative to reduce truck trips; using the container truck licensing system to require improved efficiency, safety, and environmental performance for trucks using the port; and exploring lower emissions rail technology and larger rail vehicle carrying capacity.

##### **Action**

- G 1.3.1. Support Port Metro Vancouver initiatives that reduce environmental and traffic impacts.

### **G 1.4. Support Vancouver International Airport as British Columbia’s primary air gateway**

The City supports the Vancouver International Airport’s role as the primary air gateway for both passengers and cargo in British Columbia. Some streets, like Cambie, Oak, and Granville, provide valuable connections to the airport, while also serving important local functions. The opening of the Canada Line in 2009 has significantly improved transit access for airport visitors and employees alike; improving Canada Line connections to the rest of the rapid transit network will enhance regional connectivity even further.

#### **Actions**

- G 1.4.1. Support new and improved passenger connections between the Canada Line and the rest of the existing and planned regional rapid transit network.
- G 1.4.2. Consider airport needs on major transit and road network corridors connecting to the airport, including the Canada Line, Marine Drive, and Cambie, Oak, and Granville streets.

## **G 2. LOCAL GOODS AND SERVICES MOVEMENT**

While large-scale port-related goods movement deservedly gets much of the attention, smaller-scale local movements and deliveries are key parts of a thriving local economy and high quality of life. The City has more direct opportunities to influence this scale of goods movement to maximize efficiencies and reduce impacts.

### **G 2.1. Maintain an efficient network of designated truck routes**

The City will continue to provide a robust grid of truck routes that supports reliability, efficiency, and the distribution of truck traffic across multiple streets. Local routes should be designed and coordinated as efficient feeders to the regional truck network.

#### **Actions**

- G 2.1.1. Monitor the local truck network within the city and identify opportunities to improve reliability.
- G 2.1.2. Consider limited expansion of the truck network by designating additional streets as “limited use” routes for small and mid-sized trucks, in consultation with local residents, businesses, and the trucking industry.

### **G 2.2. Provide for efficient loading and unloading**

For goods and services to be delivered efficiently, access to destinations and sufficient space for loading and unloading are critical. The City will work to maximize loading zone efficiency, and continue to consider access and loading requirements when reviewing new buildings and designing streets, plazas, bicycle lanes, and traffic calming measures.

#### **Actions**

- G 2.2.1. Review loading zone policies to ensure efficient and appropriate short-term use, and consider the following interventions as appropriate:
  - a. reviewing and revising eligibility criteria for commercial vehicle permits, prioritizing goods movement vehicles and couriers;
  - b. increasing enforcement;
  - c. introducing paid loading zones, with the potential for variable rate structures to promote turnover; and
  - d. providing additional loading zones where required.

- G 2.2.2. Revise parking requirements for new development to ensure sufficient off-street loading and parking spaces for smaller service and delivery vehicles.
- G 2.2.3. Ensure commercial laneways continue to support efficient goods movement.
- G 2.2.4. Review the benefits and implications of late night deliveries, as well as the bylaw and policy requirements for potential implementation of related strategies.

### **G 2.3. Support low-impact goods and services movement and delivery**

There is tremendous opportunity to efficiently deliver goods and services in quieter and less polluting ways, especially at the small scale and in urban environments. The City supports low-impact ways to deliver local goods and services, including active transportation (such as cargo bikes) and low-carbon and electric truck fleets. Using the ‘right-sized’ tool for the job is part of this approach—including smaller vehicles for local services and deliveries, and potentially larger ones for high-volume loads.

#### **Actions**

- G 2.3.1. Support regulations, incentives, and other strategies to facilitate efficient low-impact goods and services movement, including consideration of:
  - a. "hub and spoke" delivery models incorporating urban freight consolidation centres;
  - b. flexible loading options for cycle-based and other small-scale vehicles; and
  - c. right-sizing of service and delivery vehicles.
- G 2.3.2. Continue to demonstrate corporate leadership in procurement and operations by using low-impact approaches for City-related services and deliveries.
- G 2.3.3. Explore opportunities to optimize services that occur in laneways, to reduce the footprint for waste and recycling collection.

### **G 2.4. Support local production and distribution to reduce the need for large-scale transport**

One of the best ways to reduce the negative impacts of large-scale goods movement is to reduce long-distance trips. The City will support local production and distribution to reduce the need for transport of goods through, for example: preserving industrial land and enabling small-scale manufacturing in some areas of the city; bulk purchasing opportunities to bring together and support local producers (including community shared agriculture); and food production in the city, including roof-top gardens and urban agriculture.

#### **Action**

- G 2.4.1. Continue supporting local production and distribution through measures including the preservation of industrial land, enabling small-scale manufacturing in some areas of the city, and supporting local urban agriculture.

### **G 3. EMERGENCY RESPONSE**

It is critical that police, fire, ambulance, and other emergency providers can reach their destinations in a timely fashion. At the same time, efforts to minimize response times should not come at the expense of traffic calming and other measures intended to improve safety. A combination of traffic calming measures, appropriate vehicle sizes, and response strategies is needed to both prevent and respond to traffic collisions. For example, Vancouver's Fire and Rescue Services are adapting to the growing importance of first response over other firefighting roles by acquiring smaller, dedicated vehicles and equipment for medical response.

#### **G 3.1. Consider emergency vehicle access in street designs and traffic calming measures**

Effective streets designs and traffic calming measures reduce the number and severity of crashes. Emergencies still occur, however, and it is important to maintain neighbourhood access for emergency services.

##### **Actions**

- G 3.1.1. Work with emergency responders when developing new traffic calming plans and designs.
- G 3.1.2. Work with emergency responders to designate primary emergency response routes where certain traffic calming measures will not be implemented.

#### **G 3.2. Provide up-to-date, readily-accessible information on traffic calming measures and closures**

Emergency response suffers when service providers lack information on traffic calming measures, road closures, and other detours. Making this information readily available can save lives by reducing the emergency response time.

##### **Action**

- G 3.2.1. Maintain and make available to emergency service providers an inventory of traffic calming measures, road closures, and other detours. Provide information online and in an open format to support mobile application development.

## ENCOURAGEMENT, EDUCATION, AND ENFORCEMENT

*Encourage sustainable transportation choices and educate all road users to promote safe and respectful behaviour. Support legislation and enforcement practices that target dangerous conduct.*

### BACKGROUND STORY

Although much of this plan focuses on developing infrastructure to support our long-term goals, effective promotion and encouragement are vital for success. Recent research has found that complementary promotional programs can significantly increase the use of new walking and cycling infrastructure. This plan seeks to capitalize on the City's infrastructure investments by significantly expanding our focus on the encouragement of sustainable travel.

As more people have started to walk and cycle for everyday transportation and recreation, we have also heard increasing concerns about conflicts among road users. We need to educate more people on how to use our transportation infrastructure safely and respectfully so that everyone feels comfortable and safe regardless of how they choose to move around. There should be no inherent risk in choosing one way to travel over another.

We also hear requests for additional enforcement and changes to legislation to make walking and cycling easier and more comfortable. This plan calls for balanced enforcement practices focused on behaviours that endanger vulnerable road users, such as people on foot and bikes, as well as behaviours that cause unnecessary congestion.

### POLICIES AT A GLANCE

#### 1. Encouragement and Promotion

- 1.1. Promote walking and cycling as fun, practical, and healthy transportation choices

#### 2. Education

- 2.1. Support education and awareness programs to improve safety and reduce conflicts
- 2.2. Support cycling skills training to improve cyclist safety and confidence

#### 3. Enforcement and Legislation

- 3.1. Support enforcement practices that protect vulnerable road users
- 3.2. Support enforcement practices that can help to manage congestion impacts
- 3.3. Support laws that protect vulnerable road users
- 3.4. Work to reduce bicycle theft

## **E 1. ENCOURAGEMENT AND PROMOTION**

Vancouver is already a highly walkable city and has recently made great strides in developing its cycling infrastructure. Even with good infrastructure in place however, promotional programs are very important to help build upon our success. Inspiring and light-hearted messages that highlight convenience, health benefits, and cost-effectiveness can encourage active transportation choices as a regular part of everyday life. These programs will help to further build a culture of walking and cycling in Vancouver.

### **E 1.1. Promote walking and cycling as fun, practical, and healthy transportation choices**

Effective marketing programs can influence behaviour and change attitudes by strategically promoting different messages that resonate with various market segments. For example, messages about the convenience and practicality of walking may connect with certain people, whereas messages about the low cost and health benefits of walking may resonate with others. People who are “interested but concerned” about cycling may respond well to images of people riding comfortably as part of an ordinary routine. Messages promoting health benefits, convenience, time savings, and cost savings may also encourage cycling.

Electric-assist bicycles will likely play a larger role as cycling becomes more mainstream. Marketing programs should consider their role, especially for commuting over long distances or difficult topography, and for potential cyclists with limited physical capacity.

#### **Actions**

- E 1.1.1. Develop and implement a program to promote walking and cycling as fun, practical, and healthy transportation choices, and a normal part of everyday life.
- E 1.1.2. Continue a “safe routes to school” program that connects schools to their surrounding neighbourhood with high quality walking and cycling routes for at least one block, complemented by promotional strategies that encourage students to use active travel modes.
- E 1.1.3. Continue to support and streamline permitting processes for community events, festivals, and rides that encourage and celebrate active transportation.
- E 1.1.4. Develop recurring cyclovía-style event(s) that celebrate active transportation.
- E 1.1.5. Consider infrastructure that promotes and celebrates cycling, such as bicycle count displays and foot rests at intersection approaches.

## **E 2. EDUCATION**

Vancouver is a multi-modal city, where people make different transportation choices every day based on a variety of personal factors. Education and awareness programs are important to improve safety and encourage courteous behaviour.

### **E 2.1. Support education and awareness programs to improve safety and reduce conflicts**

Educational programs that improve knowledge of traffic rules and road user etiquette are essential to improving safety and reducing conflicts. A holistic approach can help improve interactions between users of our multi-modal transportation system. Many jurisdictions are using light-hearted campaigns with great success.

In North America, typically only a small number of questions on driver examinations relate to interactions with people on foot and bicycles, compared with more than 50% in Northern Europe. Placing greater emphasis on vulnerable road users in driver training and testing can help increase driver awareness, vigilance, and expectations of people on foot and bicycles.

### **Actions**

- E 2.1.1. Advocate for making walking and cycling safety awareness a key component of all driver training courses and examinations in British Columbia, including for commercial licenses.
- E 2.1.2. Educate all road users on the proper use of traffic control measures, such as:
  - a. crosswalks (marked and unmarked);
  - b. lane crossings and driveways;
  - c. signals, including pedestrian and bicycle signal indications;
  - d. traffic calming measures;
  - e. bicycle boxes;
  - f. designated bicycle crossings; and
  - g. other facilities as new designs and treatments are introduced.
- E 2.1.3. Work with partners such as TransLink, the Vancouver Police Department (VPD), and ICBC to promote safe and respectful interaction among all road users, particularly as it relates to vulnerable road users.

## **E 2.2. Support cycling skills training to improve cyclist safety and confidence**

Few people in North America have any formal training when it comes to cycling, especially in traffic. As a result, many people are afraid to ride on city streets, and those that do ride are sometimes singled out for flaunting rules of the road or riding in an unsafe manner.

The most effective way to provide universal cycling skills training is to incorporate it into the school curriculum, as is done in many European countries. By focusing on children, we can inspire the next generation to cycle more frequently and to have a higher level of cycling competence and awareness. Providing training for adults is also important, especially to people that are under-represented in the cycling population (such as women and new Canadians). Educational programs complement infrastructure investments and improve compliance with rules and regulations.

Although educational programs are best delivered by other organizations with expertise in training cyclists, the City can provide support to these initiatives.

### **Actions**

- E 2.2.1. Develop and implement a long-term strategy to support cycling education and skills development, including identifying partners and potential resource allocations.
- E 2.2.2. Advocate for making cycling skills training a core part of the school curriculum or widely available to youth through other means.
- E 2.2.3. Develop cycling skills training facilities in key locations around the city.

### **E 3. ENFORCEMENT AND LEGISLATION**

Enforcement and legislation should place a high priority on protecting pedestrians, cyclists, and other vulnerable road users who are most likely to be injured or killed in a collision. Focusing enforcement on dangerous behaviours such as speeding, reckless driving and cycling, and failing to yield to pedestrians in marked and unmarked crosswalks are a high priority.

Meanwhile, some behaviours may have impacts beyond safety, or affect safety indirectly. For example, drivers disobeying no-stopping zones can force cyclists further into traffic, but this behaviour can also simply add to congestion during peak periods. Similarly, violation of turn restrictions and vehicles blocking the intersection box can contribute to unnecessary gridlock.

The BC Motor Vehicle Act specifies the rules of the road for driving, cycling, and crossing streets as well as the penalties associated with breaking those rules. Police agencies play a critical role in enforcing these laws, helping to ensure that roads are safe for all users, and that vehicles (including bicycles) are protected from theft.

#### **E 3.1. Support enforcement practices that protect vulnerable road users**

People travelling on foot, bicycle, skateboard, or motorcycle are particularly vulnerable to injury and death by collision, and enforcement should target behaviours that are most likely to cause bodily harm. While motor vehicles pose the largest threat to people on foot, conflicts between pedestrians and cyclists are a growing concern.

##### **Actions**

- E 3.1.1. Work with the VPD to enhance enforcement, education, and awareness approaches targeting behaviours that endanger vulnerable road users. Focus on preventing collisions by improving interactions between people riding, driving, and walking.
- E 3.1.2. Maintain and enforce 30 km/h speed limits on bike routes and greenways.
- E 3.1.3. Encourage further development of the VPD bicycle squad.

#### **E 3.2. Support enforcement practices that help to manage congestion impacts**

To manage congestion and avoid gridlock, certain restrictions on moving and stopping are commonly employed, and enforcement is often necessary to ensure compliance. However, measures to facilitate motor vehicle movement should not come at the expense of safety—particularly for vulnerable road users—or adversely affect transit reliability.

##### **Action**

- E 3.2.1. Work with the VPD and bylaw enforcement to enhance enforcement, education, and awareness approaches targeting behaviours that contribute to congestion, such as blocking the intersection box, illegal turn maneuvers, and violation of no-stopping zones.



### E 3.3. Support laws that protect vulnerable road users

People travelling on foot, bicycle, skateboard, or motorcycle are particularly vulnerable in the event of a collision, and should be given special attention in road safety policy and legislation. Lower speed limits can significantly reduce the risk of death, for example.

In many European countries and some U.S. states, laws have been modified to provide vulnerable road users with enhanced legal protection.

#### **Actions**

- E 3.3.1. Review and update City bylaws and advocate for changes to the BC Motor Vehicle Act that:
  - a. provide enhanced legal protection for vulnerable road users;
  - b. clarify definitions and proper use of cycling-specific facilities and traffic control devices;
  - c. address inconsistencies with established safe riding behaviour;
  - d. encourage more walking and cycling while considering safety for all road users; and
  - e. establish guidelines and regulations on the types of electric-assist and electric vehicles that can use active transportation facilities.
- E 3.3.2. Advocate for provincial legislative changes to enable municipal control over blanket speed limits for city streets.

### E 3.4. Work to reduce bicycle theft

The risk of bicycle theft is a major deterrent to cycling. TransLink market research reveals that one in five cyclists in Greater Vancouver has experienced theft in the past five years. Of those who had a bike stolen, 23% did not replace the bicycle for a year, and an additional 32% did not replace the bicycle for longer than a year.

To combat bicycle theft and encourage cycling, TransLink is considering the establishment of a regional task force.

#### **Action**

- E 3.4.1. Participate in a regional bicycle theft task force to research, implement, and coordinate programs and enforcement practices that address bicycle theft, including development of a bicycle bait program.

## **C. DELIVERING THE PLAN**

## IMPLEMENTATION PRINCIPLES

Many of the actions outlined in this plan will require more detailed study and/or consultation. Given limited resources and practical constraints, achieving our goals requires us to prioritize our efforts and explore innovative funding and design solutions.

The following principles are intended to help set priorities and guide implementation of the plan.

### **Invest Wisely**

We will prioritize investments where the greatest benefits can be achieved. These include areas with high existing or potential use such as major transit exchanges and high density neighbourhoods, locations with acute problems such as collision “hotspots,” and where strategic improvements realize larger network benefits such as gaps in the transit, walking, or cycling network.

### **Think Big Picture**

We will prioritize projects that achieve multiple transportation benefits, such as improved mobility and safety, or have added value beyond transportation. Examples include projects that benefit public health, air quality, housing affordability, and commercial activity.

### **Be Opportunistic**

We will minimize costs and disruption by coordinating transportation improvements with other work projects. Whenever feasible, actions will be timed and implemented through reconstruction projects, infrastructure replacement, community plans, and new development.

### **Innovate**

We will use low-cost pilot projects to test new ideas and approaches. We will embrace new transportation and information technologies that help achieve our goals and improve efficiency.

### **Monitor, Learn, and Adapt**

We will monitor results, learn from our experiences, and adapt policies and approaches as necessary. Whenever possible, we will share data in an open format that supports third-party analysis and tool development.

### **Work Together**

We will collaborate with partners on projects that span municipal boundaries or have regional significance, or provide benefits that cross sectors. Research and funding partnerships will be pursued wherever possible, including with other government agencies, academic institutions, community and business groups, and private industry.

### **Involve and Empower Citizens and Local Businesses**

We will engage with nearby residents, businesses, and other stakeholders when developing and implementing projects. Concerns and aspirations will be understood and duly considered, and engagement approaches will foster constructive dialogue, unleash creativity, and inspire positive action.

## TRACKING PROGRESS

### Measuring Performance

Monitoring and evaluation are essential to help us understand whether we are making progress towards our goals and generally headed in the right direction. By asking the right questions and collecting the right information, we can understand trends, respond to changing circumstances, and better predict the relative impacts of various investments. We can learn from our experiences and adjust our actions accordingly. Through recent initiatives, we have already started more rigorous monitoring of infrastructure performance. This ensures accountability and responsiveness in a changing world, helping us make sound decisions that support our long-term goals.

### The Limitations of Data

It is important to understand the limitations of data and models when interpreting past results and future forecasts. In some cases, historical sources of information—such as the Canadian census, which has tracked journey-to-work information in recent versions—may disappear or require new interpretation as the questions asked or methodologies change.

Even relatively simple survey questions on travel behaviour can yield very different results depending on how questions are asked. One reason for this is *trip chaining*, which is when people combine multiple trips as part of a larger journey. Someone may stop for groceries on the way home from work, for example, and report it as either one trip or two trips, depending on how the question is understood. As a result, we must be cautious and meticulous when interpreting trends.

Fortunately, both methods and data are improving with new technology and greater commitment and cooperation amongst partners. New and emerging sources of information, such as data collected through TransLink's forthcoming Compass Card, for example, will provide much richer and more detailed information about travel behaviour.

### X 1.1. Monitor progress, evaluate results, and adapt policy accordingly

Transportation 2040 is a living plan. We will work with partners to measure progress and adapt policy and actions as necessary. To assist in performance evaluation and decision making, we will measure project impacts by collecting information before and after implementation, set interim targets, and report out on key indicators. As much as possible, we will share results in an open format to maximize transparency and support third-party analysis and tool development.

#### Actions

- X 1.1.1. Set up a system of monitoring and evaluating actions, including developing and adjusting interim targets.
- X 1.1.2. Conduct regular user surveys as part of ongoing evaluation programs, assessing comfort and perceived safety as well as actual travel behaviour.
- X 1.1.3. Undertake an ongoing transportation panel survey to study changes in travel behavior by tracking a statistically valid cohort of Vancouverites through time.
- X 1.1.4. Work with local businesses to better understand travel behaviour of customers and employees, and to measure the impacts of specific projects.
- X 1.1.5. Monitor the impacts of demand management plans for new developments, and use the results to improve effectiveness and revise policies as appropriate.
- X 1.1.6. Publish regular progress reports using key indicators.
- X 1.1.7. Work with government, academic, and private sector partners to define and monitor key indicators, and to improve data collection and evaluation tools.
- X 1.1.8. Share transportation data in an open format whenever possible to maximize transparency and enable third-party analysis and tool development.

## EMERGING AREAS OF FOCUS

Many transportation initiatives are currently underway that are based upon existing Council-approved policy and support Transportation 2040 goals. This plan affirms and reinforces these initiatives, and will help ensure they are delivered in a way that is consistent with other actions.

The plan also includes many new projects, study areas, and actions that have been identified through plan development. Some are relatively quick and straightforward to implement, while others represent fundamental changes to the way the City does business. More complex actions may unfold over several years, requiring further study, public, and stakeholder consultation, and future decisions by Council.

Some key initiatives and actions are highlighted below. Each one was reviewed as part of an overall framework that ensures we can meet the needs of a growing city and region for years to come. They support Transportation 2040's overarching goals around the Economy, People, and the Environment, as well as other city initiatives including affordable housing, health, and economic strategies as well as the Greenest City initiative. The order here does not reflect any particular priority.

## Wider Sidewalks in Commercial Areas and Near Transit

### Objective

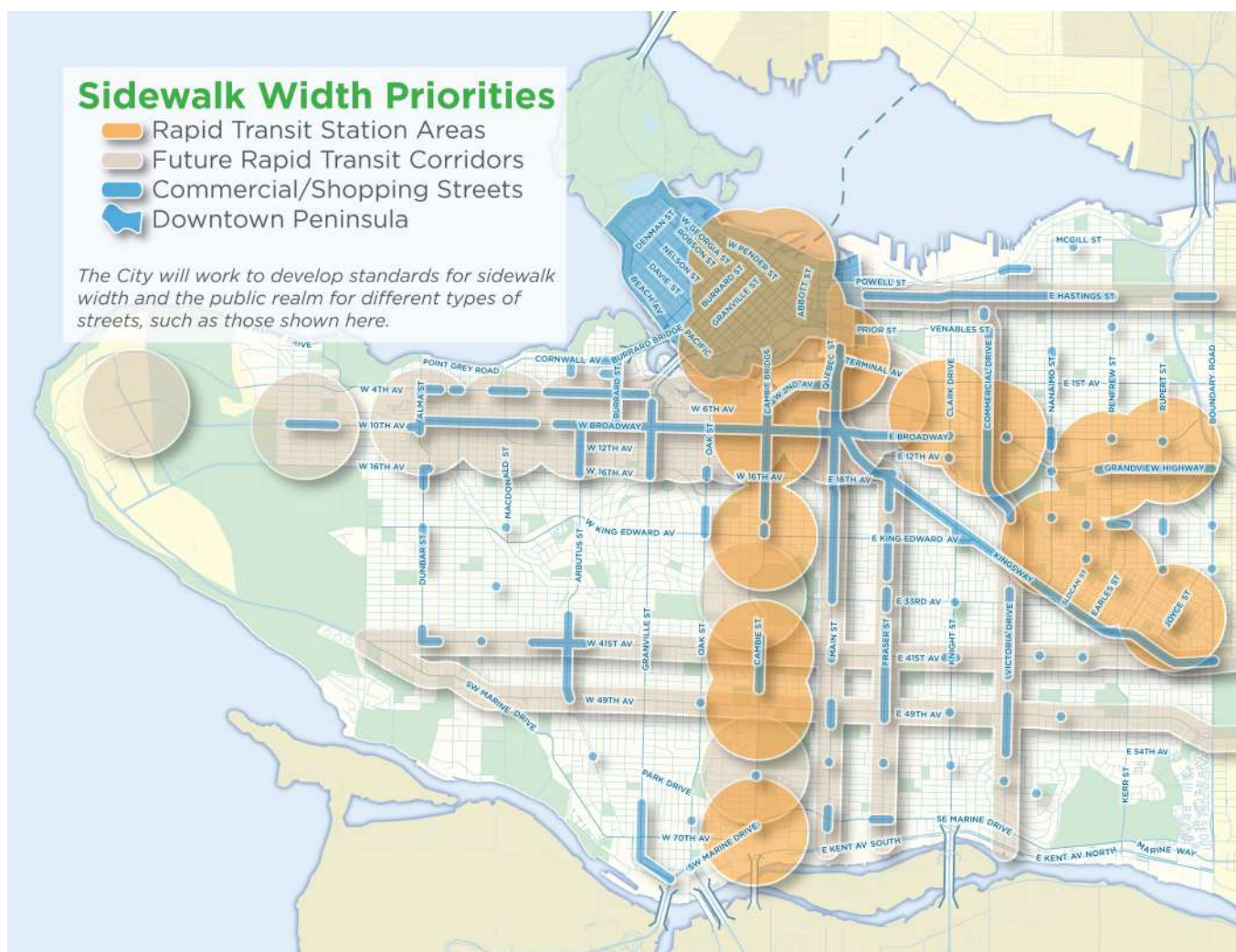
Sidewalks can get very crowded in busy commercial areas, near transit stations and other major destinations, and at pinch points. Providing generous, unobstructed sidewalk space supports more walking and street activity, and helps ensure people with mobility aids can get around. This plan calls for a more concerted approach to widening sidewalks where needed to accommodate higher volumes of people on foot, additional public space, or where pinch points need to be addressed.

### Studies or Actions Completed

To date, wider sidewalks have been achieved in some commercial areas and near transit primarily through redevelopment providing increased setbacks.

### Next Steps

In order to prioritize locations for widening sidewalks, minimum and desired pedestrian guidelines will first need to be developed for different types of streets, outlining sidewalk clear zone widths, accessibility features, surface treatments, and furniture placement. Examples of these types of streets are shown on the following map. Several different approaches can then be employed, from enforcing bylaws to maintain clear sidewalks, to reallocating road space or requiring setbacks in new development.



### **Relevant Existing Policy, Directions, and Programs**

Downtown Transportation Plan (2002)

Transportation Plan (1997)

### **Relevant Transportation 2040 Directions**

- L 1.1. Prioritize and encourage a dense and diverse mix of services, amenities, jobs, and housing types in areas well-served by frequent, high-capacity transit
- L 1.2. Locate major trip generators near rapid transit stations or along transit corridors
- L 1.3. Design buildings to contribute to a public realm that feels interesting and safe
- W 1.1. Make streets accessible for all people
- W 1.2. Provide generous, unobstructed sidewalks on all streets
- W 1.5. Address gaps in the pedestrian network
- W 1.6. Provide a blueprint for great pedestrian realm design
- W 2.2. Create public plazas and gathering spaces throughout the city
- C 2.1. Provide abundant and convenient bicycle parking and end-of-trip facilities
- C 3.1. Make it easy to combine cycling with other forms of transportation
- T 2.2. Provide easy connections and comfortable waiting areas throughout the network

## False Creek Bridges

### Objective

The False Creek Bridges are difficult and unpleasant to cross on foot or bike. All three bridges have challenges:

- The **Granville Bridge** sidewalks are narrow and uncomfortable, an inaccessible for many people due to steps at ramp crossings. Motor vehicles travel at high speeds and there are no cycling lanes on the bridge. Off-ramps that were designed to accommodate high speed traffic create additional connectivity challenges at either end of the structure.
- The **Cambie Bridge** has a wide multi-use path on the east side with two-way bicycle and pedestrian traffic that gets very busy with lots of conflicts. The west side has a narrow pedestrian path and does not accommodate cyclists. Southbound connections for cyclists are especially poor.
- The **Burrard Bridge** was retrofitted with significant cycling improvements in 2009, and bicycle ridership has climbed as a result. However, pedestrians no longer have legal access on the east side.

This plan includes actions to address key gaps in the walking network, and to provide comfortable cycling facilities to accommodate people of all ages and abilities.

### Studies or Actions Completed

Recommendations to improve conditions for walking and/or cycling have been part of previous plans and studies, but the options that were advanced proved too costly to implement. Fortunately, motor vehicle volumes across all three bridges are declining, and it is apparent that underused road space could be used to improve conditions for walking and cycling at a lower cost. The opportunity is particularly striking for the 8-lane Granville Bridge, which was overbuilt in the 1950s to accommodate high speed roads that were never built. The current road network cannot accommodate the amount of traffic that would be required to use all the bridge's capacity, and per lane motor vehicle volumes are especially low.

### Next Steps

This plan identifies the False Creek crossings as significant gaps in the pedestrian network to be addressed, and identifies the Cambie and Granville bridges as early candidates for new all ages and abilities cycling routes. Public consultation and option development will take place in the coming years, with detailed recommendations referred back to Council.

### Relevant Existing Policy, Directions, and Programs

Downtown Transportation Plan (2002)  
False Creek Pedestrian and Cyclist Crossings Study (2001)  
Bicycle Plan (1999)  
Transportation Plan (1997)

### Relevant Transportation 2040 Directions

- W 1.1. Make streets safer for pedestrians
- W 1.2. Provide generous, unobstructed sidewalks on all streets
- W 1.3. Make streets accessible for all people
- W 1.5. Address gaps in the pedestrian network
- C 1.1. Build cycling routes that feel comfortable for people of all ages and abilities
- C 1.2. Expand the cycling network to efficiently connect people to destinations
- M 1.2. Consider impacts to transit, commercial vehicles, and general traffic flow prior to reallocating road space



## Vibrant Public Spaces

### Objective

The Vancouver Economic Development Strategy highlights the importance of a vibrant downtown and neighbourhoods to attract and retain talent. Transportation 2040 builds on this direction, supporting a lively city with vibrant public spaces that encourage a culture of walking and cycling, and increased opportunities for commerce and social interaction. There are a number of actions that support this, including creating pedestrian priority streets and spaces, as well as implementing parklet and pavement-to-plazas programs.

This plan supports expanding programs that encourage creative uses of the street. It also builds on the temporary, seasonal approach to also include actions for more permanent public spaces. A City-led **Pavement-to-Plazas** program will provide high-impact public spaces at low cost. New York and San Francisco are two cities that Vancouver could look to for inspiration. In these cities, excess road space (such as wide or angled intersections and side streets) is identified, usually in neighbourhoods with high pedestrian traffic, vibrant retail, and a lack of existing public spaces. Generally, the asphalt is painted or coated, protected with decorative bollards, and populated with movable tables and chairs.

Transportation 2040 also calls for a permit-based **Parklet** program to transform on-street parking to places for people to sit, relax, and enjoy the city. Parklets often have additional benefits such as addressing sidewalk pinch points by adding more space for people to walk. The cost to the city is minimal, since they are usually designed and paid for through in-kind services and local businesses.

### Studies or Actions Completed

To date, the City has implemented public space within street rights-of-way on a temporary basis to accommodate street festivals and other public events. The Vancouver 2010 Winter Games were the City's largest endeavor to turn over our streets to large numbers of people on foot. The Downtown pedestrian streets were embraced by locals and visitors and proved to be one of the most enduring legacies of the Games.

Since that time, temporary summertime closures of several streets, including portions of Granville and Robson Streets, through the *VIVA Vancouver* program have been very successful.

Council has previously given direction to explore more permanent options for Robson Square as part of a larger public space program. Accordingly, the 2012 summertime closure of Robson Square has been extended through the Fall to allow for more extensive evaluation and consultation.

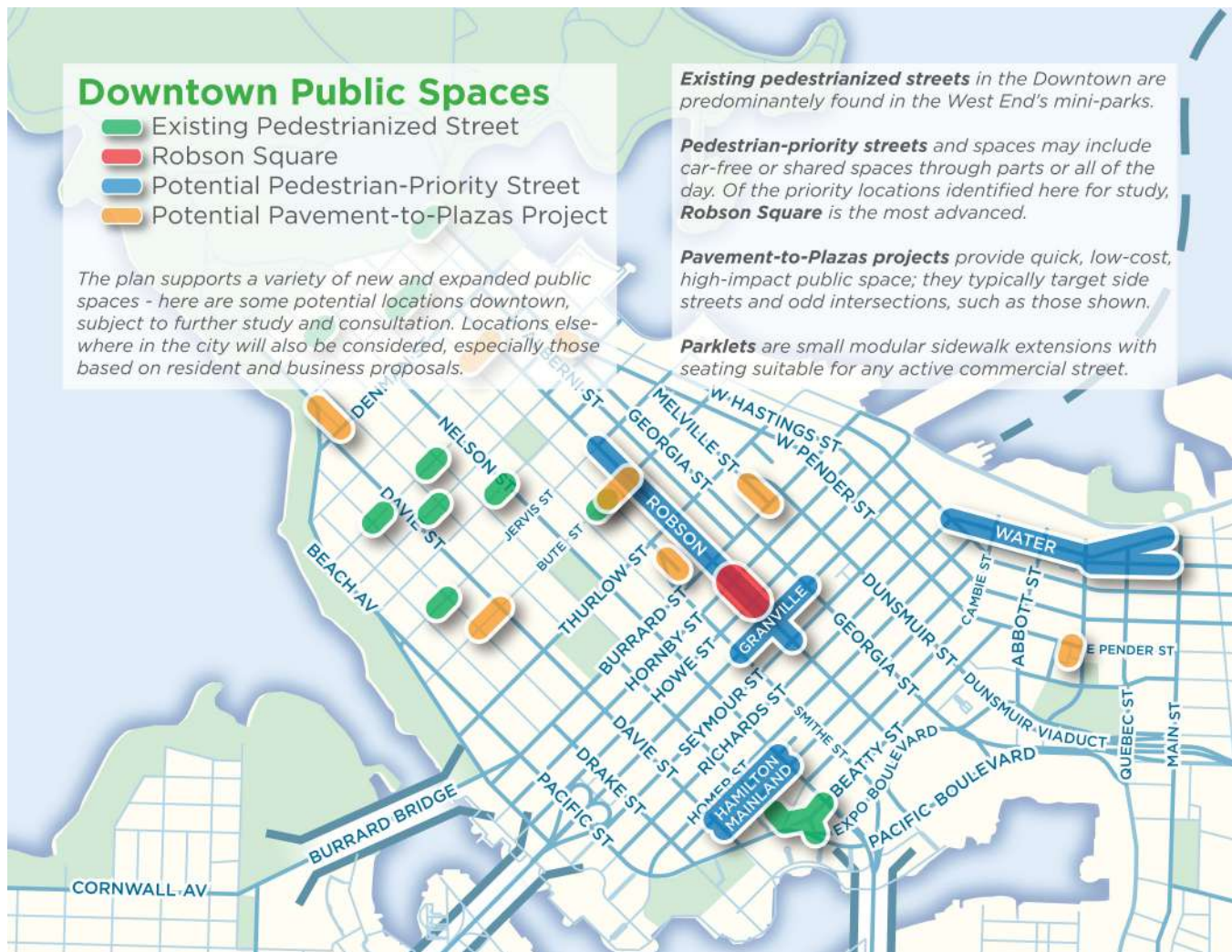
Vancouver has several successful parklets that have been piloted through *VIVA Vancouver*, including *Parallel Park* on 14<sup>th</sup> at Main Street, *Urban Pasture* on 1000-block Robson Street, and *Hot Tubs* on East 44<sup>th</sup> Avenue at Fraser Street. A simple permit approach, similar to programs in San Francisco and New York, will encourage more parklets throughout the city.

### Next Steps

Making **Robson Square** a permanent pedestrian-priority space was one of the most popular ideas through both the Greenest City and Transportation 2040 consultation processes. We are currently exploring various options—including seasonal and permanent approaches—to support the evolution of 800-block Robson Street as a vibrant public space. This includes consulting with the public and stakeholders, and carefully considering the needs of other users, including cyclists and transit users, as well as service and delivery providers.

Other candidates for pedestrian priority streets form the hearts of Downtown's most recognized character shopping districts, including **Hamilton and Mainland Streets** in Yaletown, **Water Street** in Gastown, and **Robson Street** in the Downtown and West End. Each has unique challenges regarding loading and deliveries, transit and tourist buses, motorized and bicycle traffic and parking, and historic character to be addressed. Future study and consultation for each will explore different approaches, from wider sidewalks with modified parking arrangements to car-free or shared spaces through parts or all of the day. In addition to supporting strolling and sauntering on foot, opportunities will be explored to create spaces suitable for sitting and lingering along the way.

The Transportation 2040 Implementation Strategy will explore how to develop the **Parklet** and **Pavement-to-Plazas** concept into more formal programs within Vancouver. Some potential projects are highlighted on the following map.



### Relevant Existing Policy, Directions, and Programs

- Various local area plans (ongoing)
- VIVA Vancouver (ongoing)
- Council Motion: "Creation of Public Square, 800 Robson Street" (2010)
- Vancouver Economic Development Strategy (2010)
- Downtown Transportation Plan (2002)
- Transportation Plan (1997)

### Relevant Transportation 2040 Directions

- W 1.2. Provide generous, unobstructed sidewalks on all streets
- W 2.1. Enable and encourage creative uses of the street
- W 2.2. Create public plazas and gathering spaces throughout the city
- M 2.5. Design parking to be flexible and adaptable
- G 2.2. Provide for efficient loading and unloading

## All Ages and Abilities Cycling Network

### Objective

This plan aims to make cycling safe, convenient, comfortable, and fun for people of all ages and abilities. To achieve this, it is essential to improve and expand the existing network with low-stress, high quality bike routes.

Building a complete network cannot happen overnight, so the plan calls for shorter term (approximately 5 year) implementation plans that will be regularly updated in consultation with stakeholders. In general, priority will be given to routes with the highest existing or potential demand, critical gaps in the network, high collision areas, and connections to key destinations such as schools, community centres, major transit stations, and commercial high streets. The City will also expand the network elsewhere as opportunities arise, for example through other construction projects. Route directness and topography are also important factors to be considered.

### Studies or Actions Completed

The City has long been developing a bicycle network that is designed for people of all ages and abilities, beginning with the Seawall around Stanley Park and False Creek. More recently, the City has focused much of its effort on developing a network of designated bicycle routes on local streets, many of which are comfortable for a broad spectrum of the population. However, some of these routes carry high traffic volumes or are not entirely located along quieter local streets. As well, until recent development of the Downtown separated bicycle lanes on Burrard Bridge, Hornby Street and Dunsmuir Street and Viaduct, there were no routes penetrating the Downtown Peninsula or on commercial streets that could be considered comfortable for people of all ages and abilities.

Research at UBC has confirmed that many more people would consider cycling for their daily needs if more routes protected from high traffic volumes and speeds were provided.

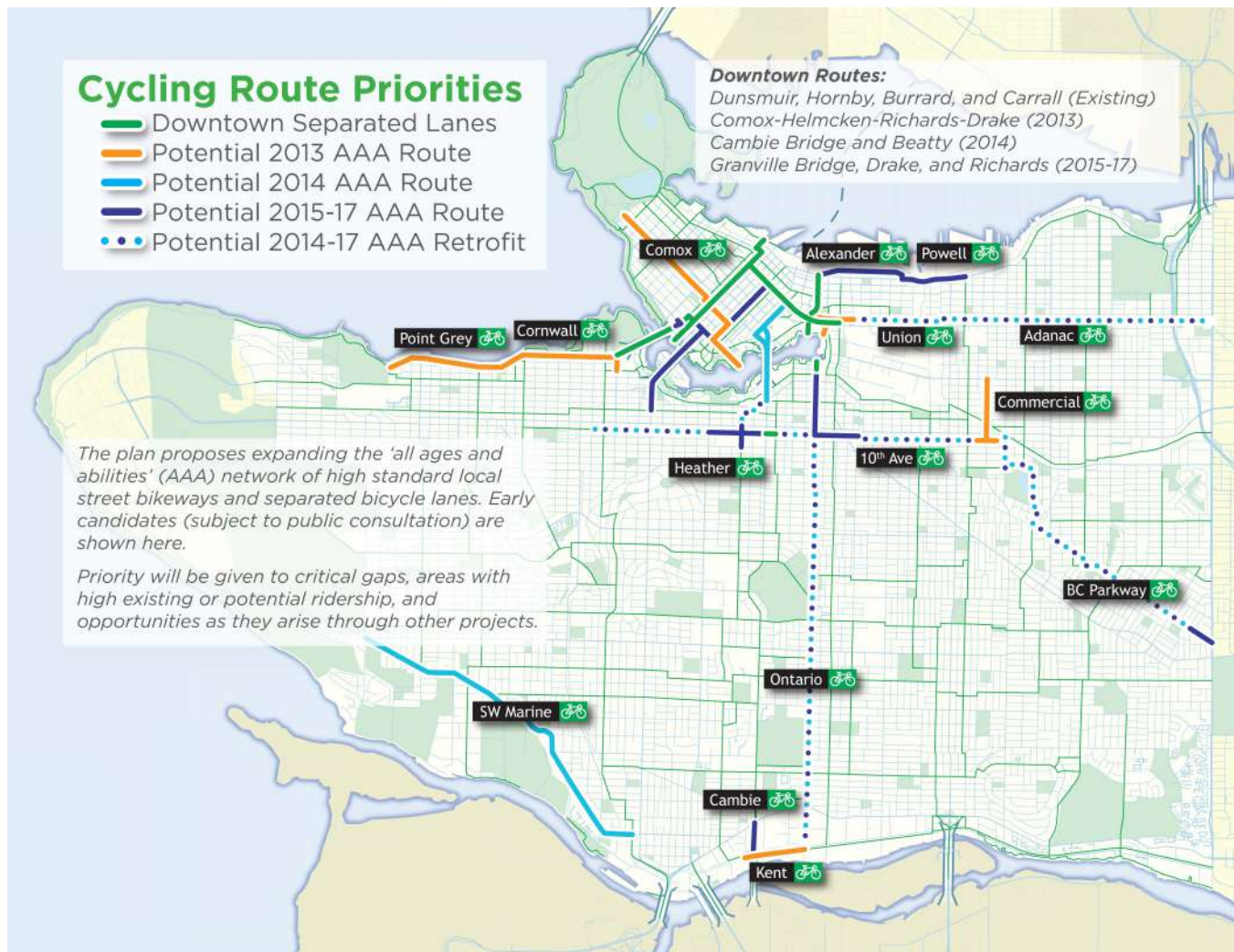
### Next Steps

The first short-term implementation plan is shown in on the following map. These routes have been selected for a number of reasons. The **Point Grey-Cornwall** corridor addresses a critical gap the existing all ages and abilities seawall network, and improves commuter cycling connections to the Burrard Bridge. The **Commercial Drive** corridor serves an area with some of the highest existing and potential bicycle ridership, and would serve a busy commercial high street with many important destinations. In addition, both of these routes have been identified in previous plans, and address some of our highest collision locations.

Other near-term locations identified on the map include spot improvements to the **Adanac Bikeway**, which is one of our busiest bike routes and connects to the downtown all ages and abilities network, and **SW Marine Drive**, which presents an opportunity because of other work taking place in the area. The **Comox-Helmcken Greenway** connects Stanley Park to False Creek and will fill an important gap in the downtown active transportation network. It was approved as part of the 2002 Downtown Transportation Plan, and is further along in the consultation and design process.

In all cases it is important to consider other street functions and neighbourhood needs, and to tie the work into other plans that are currently in development. Both Cornwall Avenue and Commercial Drive have busy bus routes, and efforts will be made to maintain transit reliability. The City will work to improve the pedestrian environment and address business concerns around access for customers who drive as well as for services and deliveries. Given the complexity of these areas, staff will undertake a rigorous analysis, consider alternative routes that meet project objectives, and consult with residents and other stakeholders before returning to Council with detailed recommendations for approval.





### Relevant Existing Policy, Directions, and Programs

- Various local area plans (ongoing)
- Downtown Transportation Plan (2002)
- Bicycle Plan (1999)
- Transportation Plan (1997)
- Greenways Plan (1995)

### Relevant Transportation 2040 Directions

- W 1.1. Make streets safer for pedestrians
- W 1.2. Provide generous, unobstructed sidewalks on all streets
- W 1.3. Make streets accessible for all people
- C 1.1. Build cycling routes that feel comfortable for people of all ages and abilities
- C 1.2. Expand the cycling network to efficiently connect people to destinations
- M 1.2. Consider impacts to transit, commercial vehicles, and general traffic flow prior to reallocating road space
- M 1.3. Manage traffic to improve safety and neighbourhood livability
- G 1.1. Provide for efficient loading and unloading

## Public Bike Share

### Objective

Public bike sharing (PBS) provides convenient, comfortable, flexible, and affordable cycling options to residents and visitors alike. Subscribers can borrow a bike from one of hundreds of highly visible locations, use it, and return it to another location at the end of the journey. More than 300 cities around the world—including Montreal, Toronto, Boston, Paris, and London—have successfully implemented programs.

In addition to providing people with a healthy transportation option, PBS has been shown to extend the reach of walking and transit trips, and reduce the need for driving trips. It has mainstream appeal, encouraging a new audience to cycle. There is also strong evidence that PBS is extremely safe and increases overall cycling, even among people with private bikes.

### Studies or Actions Completed

PBS was a popular idea in the *Greenest City* and *Transportation 2040* consultation process, and emerged as a key *Greenest City* Green Transportation action item. TransLink previously completed a regional PBS feasibility study and concluded that the Metro Core area is ready for such a system as an extension of the transit system. However, TransLink has been unable to pursue this at a regional level.

Since that time, Council directed staff to pursue implementation of a PBS system. The City has identified a preferred vendor and operator through a procurement process and—subsequent to separate Council approval—is looking to launch a program in summer 2013.

### Next Steps

The City is currently negotiating with the preferred vendor and, subject to Council approval, is expecting a launch date in summer 2013. Staff are currently in the process of identifying potential station locations and revising necessary bylaws to accommodate a PBS system.

### Relevant Existing Policy, Directions, and Programs

- Greenest City Action Plan (2011)
- Council Motion: “Public Bike Share (PBS) System” (2009)
- TransLink Public Bike System Feasibility Study (2008)

### Relevant Transportation 2040 Directions

- C 3.1. Make it easy to combine cycling with other forms of transportation
- C 3.2. Provide a public bicycle system

## Seawall Improvements

### Objective

Vancouver's system of waterfront paths for pedestrians and cyclists is cherished by both residents and visitors. Over the years, new additions have been built to progressively higher standards, and the paths are often filled with people on foot and bicycle, as well as in-line skates, skateboards, and other mobility aids. Many locations, particularly older stretches with only one shared surface, suffer from uneven surfaces, overcrowding, and increased conflicts among users. In the long term, the City will work to improve older segments of the Seawall to separate users, reduce conflicts and provide an even, comfortable walking and riding surface.

### Studies or Actions Completed

Recently completed segments of the Seawall, such as those in Southeast False Creek and along the north shore of False Creek, have been designed both to separate users and to accommodate much higher volumes of users. The Vancouver Park Board recently approved the Stanley Park Cycling Plan, which identifies a range of potential improvements for the Seawall in Stanley Park to reduce conflicts between users.

### Next Steps

The City will work with the Park Board, private developers, and other partners to deliver the improvements and ensure a consistent, integrated system around False Creek. A first step will be to assess current conditions for various forms of active transportation, and to identify existing and future issues of capacity, quality, comfort, accessibility, and conflict. We will also develop and implement a long-term investment strategy to prioritize improvements. Potential measures could include extending and realigning the seawall and associated paths to widen and/or separate cycling and walking facilities, providing safer crossings and improved separation from motor vehicle traffic, and upgrading and promoting parallel 'bypass' cycling routes.

### Relevant Existing Policy, Directions, and Programs

Stanley Park Cycling Plan (2012)

Downtown Transportation Plan (2002)

### Relevant Transportation 2040 Directions

- W 1.2. Provide generous, unobstructed sidewalks on all streets
- W 1.3. Make streets accessible for all people
- W 1.7. Make the city easy to navigate on foot
- W 2.2. Create public plazas and gathering spaces throughout the city
- C 1.1. Build cycling routes that feel comfortable for people of all ages and abilities
- C 1.4. Make the cycling network easy to navigate

## Georgia and Dunsmuir Viaducts / Eastern Core

### Objective

The viaducts are two elevated roadways connecting the False Creek Flats area to downtown Vancouver. Originally built in 1915 to bypass the tidal waters, rail lines, and industry below, they were rebuilt in the 1960s as the first step in a proposed freeway system that was abandoned after public opposition. Land use around these structures has changed a lot since then, leaving the viaducts as an isolated stretch of freeway connected at both ends to an urban street network. They are more expensive to maintain than roads at grade, divide historic neighbourhoods from False Creek, and occupy two blocks of centrally located land.

### Studies or Actions Completed

A team of urban designers, landscape architects, transportation and structural engineers, and cost consultants—working in collaboration with City staff—have developed a new concept plan for the viaducts land. The concept—which proposes removing and replacing the viaducts with a reconfigured at-grade road network—supports numerous Transportation 2040 objectives. It repairs a major gap in the city’s urban fabric, unlocks park, affordable housing, and other development opportunities, and improves pedestrian and cyclist connections. Significant work has been done to ensure that effective transportation routes to and from the downtown remain for both people and goods movement.

### Next Steps

Concept planning for the viaducts lands is part of a larger strategic planning review for the Eastern Core, the area that stretches from Northeast False Creek to Clark Drive, bounded generally by Prior/Venables to the north and Great Northern Way to the south. The Eastern Core Strategy seeks to improve transportation connectivity in the study area for all modes, while maintaining industrial and other transportation-related functions. The transportation network will be examined within the context of establishing a “green enterprise zone” with a focus on sustainable jobs.

### Relevant Existing Policy, Directions, and Programs

Greenest City Action Plan (2011)  
 re:CONNECT: Visualizing the Viaducts competition (2011)  
 Council Motion: “Georgia and Dunsmuir Viaducts” (2009)  
 Northeast False Creek: Directions for the Future (2009)  
 Rezoning Policy for “High Tech” Sites in the False Creek Flats (2009)  
 Industrial Lands Policies (1995)

### Relevant Transportation 2040 Directions

- W 1.1. Make streets safer for pedestrians
- W 1.5. Address gaps in the pedestrian network
- W 1.6. Provide a blueprint for great pedestrian realm design
- W 2.2. Create public plazas and gathering spaces throughout the city
- C 1.1. Build cycling routes that feel comfortable for people of all ages and abilities
- C 1.2. Expand the cycling network to efficiently connect people to destinations
- T 1.5. Support improved inter-regional transit
- M 1.2. Consider impacts to transit, commercial vehicles, and general traffic flow prior to reallocating road space
- M 1.3. Manage traffic to improve safety and neighbourhood livability
- G 1.1. Protect and improve rail corridors for goods and passenger movement
- G 2.1. Maintain an efficient network of designated truck routes
- G 2.3. Support low-impact goods and services movement and delivery
- G 2.4. Support local production and distribution to reduce the need for large-scale transport

## Broadway Corridor Rapid Transit

### Objective

Frequent, high-capacity rapid transit in the Broadway Corridor is the City's top transit priority. Without significant new investment, achieving the goals of this plan is not possible. Some key facts are presented below.

- *Broadway is a regionally important and growing corridor.* The corridor—stretching from Commercial Drive to UBC—is already home to over 85,000 people and 100,000 jobs and is expected to grow significantly over the coming decades. It includes key regional destinations including Central Broadway—the province's largest employment centre after Downtown Vancouver, where half of all employees live outside city limits—and the province's largest hospital and largest university.
- *Significant new service is required to meet existing demand.* There are over 110,000 transit trips made on Broadway buses every day, making it one of the busiest bus corridors in North America. Buses are overcrowded and beyond capacity for most of the day. Even with B-Line services running every 2 to 3 minutes, and trolley services providing additional capacity, thousands of waiting passengers are left behind daily. Travel times are also unpredictable, varying between 25 and 45 minutes, discouraging transit use.
- *A high-capacity, long-term solution is needed to meet future targets and ensure a prosperous, livable future.* The City, region and Province have set ambitious emissions and travel mode targets. Significant transit improvements are needed to achieve these targets and provide the people-moving capacity required to support economic and community development.

### Studies or Actions Completed

In 1999, TransLink and the City of Vancouver jointly funded and directed a study exploring rapid transit options in the corridor. Options were compared using a number of factors, including customer service, cost effectiveness, and environmental and community impacts. Based on the study results, the City and TransLink recommended that the Millennium SkyTrain Line be extended in an underground tunnel west to Central Broadway with a rapid bus connection to UBC.

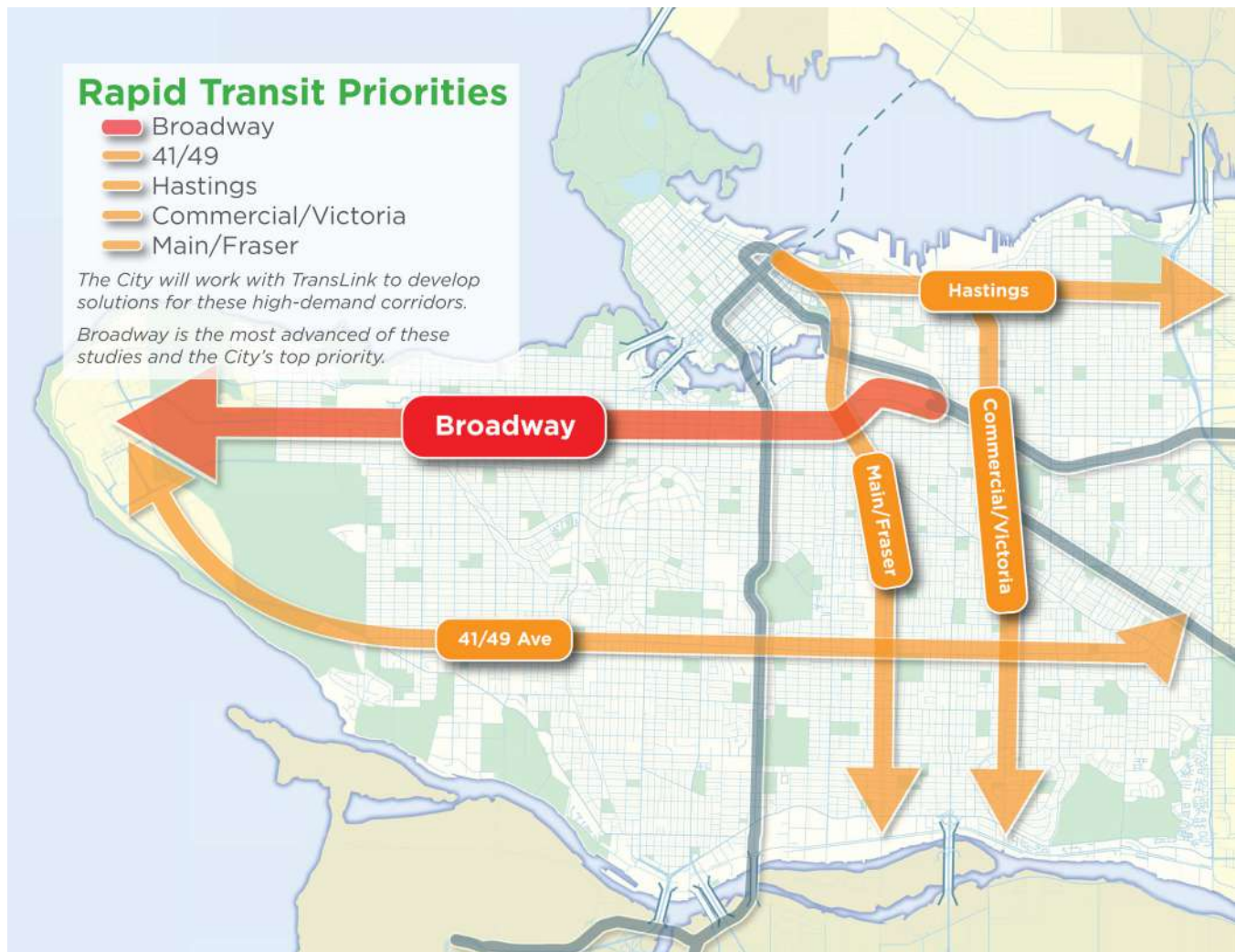
Since then, ridership in the corridor has grown even faster than expected, due to job and population growth on the corridor, innovative programs such as U-Pass, and overall regional transit growth. A new study was launched in 2009 to explore various options for improving transit services in the Broadway Corridor between Commercial Drive and UBC. The study is being co-managed by the Province and TransLink with the City of Vancouver involved as one of five partner agencies.

Rail Rapid Transit through Central Broadway is the only option that supports the City's vision for the Corridor and meets the long term transit service requirements. Underground options provide for higher capacity, speed, frequency, and reliability. They also ensure that local surface transit and existing active transportation connections can be maintained. Finally, by freeing up road space, they create opportunities to transform Broadway into a great street by allocating more room for other uses such as wider sidewalks, public spaces, more street trees and landscaping, bike lanes, and/or all-day parking.

### Next Steps

The City will continue to work with partners to plan and deliver a reliable and high-capacity rapid transit solution for the corridor supports long-term needs and goals. We will continue to explore and advocate for new funding sources, and plan for potential future stations and alignments. Since it will take several years to deliver the project, we are also working with TransLink to plan for interim capacity improvements. The Broadway Corridor is highlighted as the City's top rapid transit priority on the following map.





### Relevant Existing Policy, Directions, and Programs

Central Broadway Planning Program (in progress)  
 Grandview-Woodland Community Plan (in progress)  
 City of Vancouver's Rapid Transit Principles for the Broadway Corridor (2010)  
 Mount Pleasant Community Plan (2010)  
 TransLink's Transport 2040 (2008)  
 Provincial Transit Plan (2008)  
 Vancouver-UBC Area Transit Plan (2005)  
 TransLink-City of Vancouver Beyond the B-Line Report (1999)  
 Transportation Plan (1997)

### Relevant Transportation 2040 Directions

- T 1.1. Advance new and improved rapid transit
- T 6.1. Support stable and equitable long-term transit funding sources
- L 1.1. Prioritize and encourage a dense and diverse mix of services, amenities, jobs, and housing types in areas well-served by frequent, high-capacity transit

## Comprehensive Parking Strategy

### Objective

Parking is one of the City's biggest transportation levers and is top of mind for both residents and businesses. An effective and comprehensive approach to parking can:

- support more sustainable transportation choices like walking, cycling, transit, and car sharing;
- significantly reduce housing and business costs, e.g. by allowing people to purchase or rent only what they need;
- improve neighbourhood livability through effective curb space management;
- recognize the importance of curb space as a valuable public resource, especially where demand for right-of-way is at a premium; and
- support local businesses and reduce congestion by making it easier for customers to find an available space, and by enabling the efficient delivery of goods and services.

This plan includes a number of directions related to parking supply, management, and design. They address a broad range of interconnected parking elements, including residential and meter parking, off-street requirements, demand management strategies, and parkade management. They are intended to complement and support each other, and should be considered as a complete package of measures.

### Studies or Actions Completed

Staff routinely review the parking bylaw and development requirements to keep parking requirements up-to-date. Parking meter and permit rates are regularly adjusted. Meter rates in particular are adjusted on a very regular basis to ensure that the goal of high turnover is being achieved in all areas where meters are in use. Zones for all special uses (taxis, commercial use, passenger zones, car-share parking) are also continually being reviewed.

### Next Steps

Together the Transportation 2040 parking directions will inform a comprehensive approach that addresses the needs of busy commercial areas and residential districts, both on and off street. Staff will conduct an extensive and holistic review of existing policies, working to ensure they align with Transportation 2040 and other key City objectives. Emerging technology and ideas—such as smart parking meters and car-sharing—may lead to entirely new approaches in parking management.

### Relevant Existing Policy, Directions, and Programs

Parking Bylaw, Parking Meter Bylaw, Street and Traffic Bylaw  
 Various local area plans (ongoing and completed)  
 Affordable Housing Strategy (2012)  
 Cambie Corridor Plan (2011)  
 Transportation Plan (1997)

### Relevant Transportation 2040 Directions

- M 2.1. Use off-street parking requirements to support reduced ownership and use
- M 2.2. Support strategies that reduce the need for parking
- M 2.3. Separate parking and housing costs to increase housing affordability
- M 2.4. Approach parking as a shared district resource
- M 2.5. Design parking to be flexible and adaptable
- M 2.6. Make it easier for drivers to find available parking spaces
- M 2.7. Manage parking in neighbourhoods
- M 2.8. Provide accessible parking for persons with disabilities
- M 2.9. Support cycling, low-carbon vehicles, and car sharing
- M 2.10. Support efficient loading and servicing

## The Arbutus Corridor

### Objective

The Arbutus Corridor is an 11-km stretch of land owned by the Canadian Pacific Railway (CPR) that runs from near False Creek to the Fraser River. Although currently not in use, it was a busy passenger and goods movement rail corridor for many years, with some services running as recently as 2001.

Over the years, there has been strong public support to preserve the corridor for future passenger rail and/or active transportation use. This plan continues to consider the Arbutus Corridor as an important north-south transportation for both active transportation and transit.

### Studies or Actions Completed

In 2000, Vancouver City Council passed the Arbutus Corridor Official Development Plan, which proposed developing the corridor as a multi-use transportation and greenway corridor including rail, bicycle, and pedestrian use. This was challenged by the CPR, who wished to develop the corridor for other purposes; however, the Supreme Court of Canada ruled in the City's favour in 2006.

### Next Steps

Transportation 2040 maintains the City's long-term transportation objective to develop the corridor as both an active transportation greenway—including high quality walking and cycling routes—as well as a future streetcar or light rail line. Since the corridor currently acts as an east-west barrier in many places, improving connectivity across the corridor will also be an important outcome. The work requires detailed planning, and a phased approach is possible given land negotiations and other uncertainties.

### Relevant Existing Policy, Directions, and Programs

Arbutus Corridor Official Development Plan (2000)

Transportation Plan (1997)

Various Downtown Streetcar plans

### Relevant Transportation 2040 Directions

- W 1.5. Address gaps in the pedestrian network
- W 1.6. Provide a blueprint for great pedestrian realm design
- C 1.1. Build cycling routes that feel comfortable for people of all ages and abilities
- C 1.2. Expand the cycling network to efficiently connect people to destinations
- T 1.1. Advance new and improved rapid transit
- T 1.2. Advance new and improved local transit

## Burrard Inlet Crossings

### Objective

Transportation 2040 acknowledges that a past agreement still exists to remove private automobile traffic from the Stanley Park Causeway and Lions Gate Bridge by 2030. However, the agreement stipulated that this repurposing would take place in conjunction with the development of a third Burrard Inlet crossing. Since there are currently no such plans for a third crossing, the City will work with partners to determine whether this agreement should be rescinded, as well as any other appropriate actions for this regional issue.

### Studies or Actions Completed

In 2000, an agreement was reached between the BC Transportation Financing Authority, the Insurance Corporation of BC, TransLink, the City of Vancouver, and the Vancouver Board of Parks and Recreation. The agreement committed each party to a long-term objective to remove private automobile traffic from the Stanley Park Causeway and Lions Gate Bridge by 2030, with the facilities being reconfigured as a dedicated transit, cyclist, and pedestrian route, or turned back to park use. It further stipulated that this repurposing would take place in conjunction with the development of a new Burrard Inlet Crossing that is consistent with the aspirations of the communities that it will connect.

This agreement was part of a larger contract to widen and alter road alignments in Stanley Park in the early 2000s. It was intended to acknowledge the negative impacts of causeway traffic on park users, and to encourage more environmentally-friendly means of transportation. Since then, a number of improvements have been made, including better cyclist connections on the bridge, and transit queue jumpers at the north end of the bridge to improve flow for southbound buses.

Since the agreement was completed, significant public investments have been made in road, transit, and cycling infrastructure at both ends of the Lions Gate Bridge and on the bridge itself. The interchange at the north end of the bridge was completely replaced, for example, and now includes queue jumpers that give transit priority access to the bridge.

### Next Steps

There are currently no new crossings being contemplated by local, regional, or provincial governments, and future conditions may warrant alternative approaches. The North Shore municipalities have indicated a desire to partner on a review of all possible options, including maintaining the status quo, as well as a wider study of transportation needs (including movement of people as well as goods and services) across the entire Burrard Inlet. The City will work with TransLink and other agreement signees as well as the Port and North Shore municipalities to determine the appropriateness of any actions for this regional issue.

### Relevant Existing Policy, Directions, and Programs

- TransLink 2045 plan (in development)
- Ironworkers Memorial Bridge Sidewalk Railing Concept Study (2009)
- Stanley Park Causeway Agreement (2000)
- Various third crossing proposals

### Relevant Transportation 2040 Directions

- W 1.2. Address gaps in the pedestrian network
- C 1.1. Build cycling routes that feel comfortable for people of all ages and abilities
- C 1.4. Make the cycling network easy to navigate
- T 1.4. Support increased water-based transit
- T 1.5. Support improved inter-regional transit
- G 1.2. Support truck movement on key regional routes
- G 1.3. Support Port Metro Vancouver efforts to reduce environmental and traffic impacts

## The Fraser River Area

### Objective

This plan identifies the city's southern edge as a complex area requiring further study. The industrial land south of Marine Drive is important to the region, but feels disconnected from the rest of the city due to busy arterials, rail tracks, and limited connectivity for pedestrians or cyclists. Much of the shoreline is a working riverfront, but the river also serves as critical natural habitat for fish, birds, and wildlife, and its stewardship is vital to a much larger bioregion.

### Studies or Actions Completed

Kent Avenue has been developed as an important east-west bikeway between Ontario Street and Boundary Road. The portion of the Kent Bikeway is being upgraded through redevelopment of East Fraserlands.

In 2009, Canada Line was completed between Vancouver and Richmond. The bridge over the Fraser River includes a walking-cycling structure, which has increased walking and cycling demands at the south end of Cambie Street. Cycling improvements have been identified as a high priority in the five-year implementation strategy outlined in the preceding section on *All Ages and Abilities Cycling Network*.

### Next Steps

In this context, there are multiple challenges for the city: to protect and enhance regionally-important industrial use; to enhance walking, cycling, transit, and goods movement connections to and through the area; to improve access to the water and provide community amenities; and to maintain and enhance the local ecosystem.

Specific transportation objectives include developing near- and long-term visions for an active transportation greenway and transit corridor along the riverbank; improving walking and cycling network connectivity, including to residential neighbourhoods north of SE Marine Drive; assessing the potential for using street ends to provide green space along the river; reviewing long-term needs for freight and passenger rail movement; and exploring the potential for water transit, including docking facilities. This will also have synergies with other regional initiatives such as Metro Vancouver's "Experience the Fraser Project" which will extend to the North Arm of the Fraser in the future.

### Relevant Existing Policy, Directions, and Programs

- Marpole local area plan (in development)
- East Fraserlands Official Development Plan (2006)
- Arbutus Corridor Official Development Plan (2000)
- Transportation Plan (1997)
- Greenways Plan (1995)
- Various Downtown Streetcar plans

### Relevant Transportation 2040 Directions

- W 1.1. Make streets safer for pedestrians
- W 1.3. Make streets accessible for all people
- W 1.5. Address gaps in the pedestrian network
- C 1.1. Build cycling routes that feel comfortable for people of all ages and abilities
- C 1.2. Expand the cycling network to efficiently connect people to destinations
- T 1.2. Advance new and improved local transit
- T 1.4. Support increased water-based transit
- M 1.1. Optimize network operations to manage congestion impacts
- M 1.2. Consider impacts to transit, commercial vehicles, and general traffic flow prior to reallocating road space
- G 1.1. Protect and improve rail corridors for goods and passenger movement
- G 2.4. Support local production and distribution to reduce the need for large-scale transport

## Rail Corridor Strategies

### Objective

Rail corridor strategies are an important component of Transportation 2040 to support our role as a major port and gateway and to maximize the opportunities to move goods and people by rail. They serve multiple purposes:

- They identify strategies to improve the capacity and efficiency of the rail network. Rail is the most efficient and environmentally-friendly way to move goods and people over long distances.
- They provide opportunities for better connections along and across tracks, improving pedestrian, cycling, transit, and vehicle movement and safety. They can also explore approaches to overcome the physical and psychological barrier often created by major rail corridors within and between neighbourhoods.

### Studies or Actions Completed

To date, the City has completed one rail corridor strategy which is only beginning to be implemented. The **False Creek Flats Rail Corridor Strategy (FCFRCS)** includes plans for developing several overpasses and closing several at-grade crossings along the Burrard Inlet Rail Line. Transportation 2040 supports this strategy, while noting that details on walking, cycling and neighbourhood circulation will need to be refined through design and consultation as projects move forward.

The **Powell Street Overpass** is the first project within the FCFRCS to come forward. Staff have consulted with stakeholders and the public, and are continuing to work with partner organizations to finalize project details. Council is expected to make a decision on project construction in early 2013.

### Next Steps

Future components of the **Burrard Inlet Line** (subject to further planning consultation and capital funding) include:

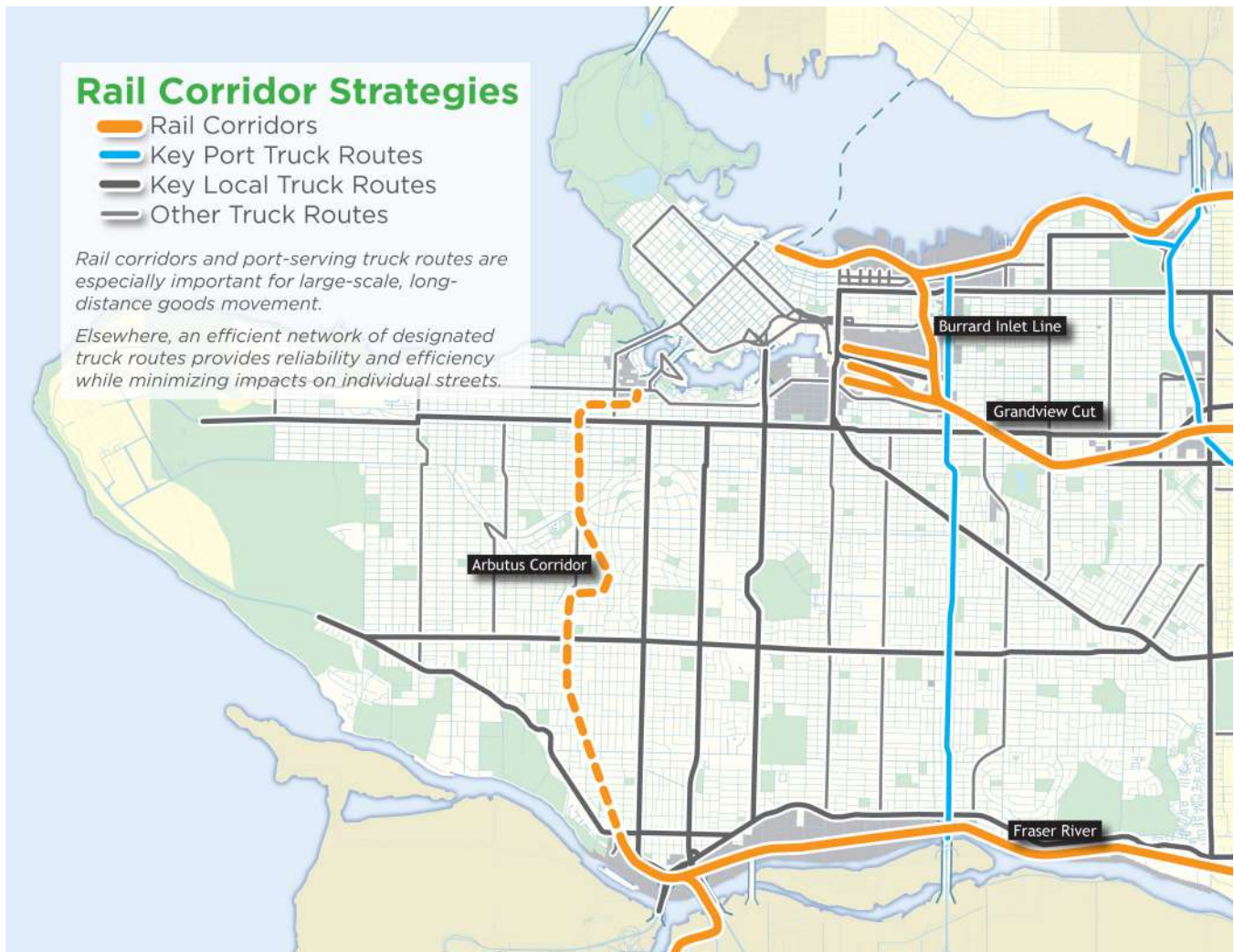
- The Malkin Street Overpass, which involves extending Malkin Street to connect to Clark Drive at Charles Street. The timing and implementation of this project are currently being evaluated as part of the City's Eastern Core Strategy.
- The Central Valley Greenway (CVG) Overpass, a walking and cycling bridge over the Burrard Inlet Line to better connect the existing CVG to the False Creek Flats area. The timing and implementation of this project are currently being evaluated as part of the City's Eastern Core Strategy.
- Closure or realignment of several local industrial streets (Cordova, Raymur Parker, Glen Streets) to improve rail reliability. Implementation is subject to redevelopment or property acquisition, as well as capital funding.
- Union Street Overpass or Prior/ Venables Underpass, to provide rail priority while maintaining an important connection for the Adanac Bikeway. Details will depend on decisions made with respect to the Georgia/ Dunsmuir viaducts, Malkin Avenue, and the cycling network.

Other rail corridors in the City include:

- **Grandview Cut.** This corridor runs east-west from Clark Drive to Boundary Road with numerous arterial and local street crossings, and also accommodates the Millennium SkyTrain Line. A rail corridor strategy would consider how to address the challenges of protecting rail capacity and improving active transportation, transit and motor vehicle movement and safety, while connecting neighbourhoods – such as Commercial Drive – across the cut.
- **Fraser River.** Rail services and facilities for both freight movement and public transit along the north shore of the Fraser River will be considered as part of a broader review of transportation and public amenities in this area, as noted elsewhere in this section.
- **Arbutus Corridor.** This corridor is no longer being used for rail movement, but is envisioned as a future active transportation greenway and streetcar/light rail line. See preceding section on Arbutus Corridor for more detail.

The following map highlights key corridors for goods and services movement within Vancouver.





#### Relevant Existing Policy, Directions and Programs

- Powell Street Overpass (in development)
- Eastern Core Strategy (ongoing)
- Georgia and Dunsmuir Viaducts Study (ongoing)
- False Creek Flats Rail Corridor Strategy (2008)

#### Relevant Transportation 2040 Directions

- W 1.5. Address gaps in the pedestrian network
- C 1.2. Expand the cycling network to efficiently connect people to destinations
- T 1.5. Support improved inter-regional transit
- M 1.1. Optimize network operations to manage congestion impacts
- G 1.1. Protect and improve rail corridors for goods and passenger movement

## Major Road Network

### Objective

The Major Road Network (MRN) is a designated network of arterial streets that are of particular significance to regional transportation for supporting goods movement, transit services, and traffic movement. The network spans Metro Vancouver and is jointly managed and maintained by TransLink and the municipalities. Modifications to the MRN, such as signal installations and left-turn bays, are eligible for cost-shared funding from TransLink. Transportation 2040 recognizes the importance of the MRN in facilitating the movement of goods and services, transit and general traffic throughout the region. It identifies the City's desire to include additional roads in the designated MRN.

Several of the City's major roads are part of the regional MRN, including: Broadway, 41<sup>st</sup> Avenue, Granville Street, Oak Street, Cambie Street, and Knight Street, among several others.

### Studies or Actions Completed

The initial MRN was designated based on a set of criteria that considers traffic, transit and goods movement volumes. However, TransLink is currently reviewing the criteria for designation of major roads as part of the MRN.

Several of the City's major roads are part of the regional MRN, including: Broadway, 41<sup>st</sup> Avenue, Granville Street, Oak Street, Cambie Street, and Knight Street, among several others.

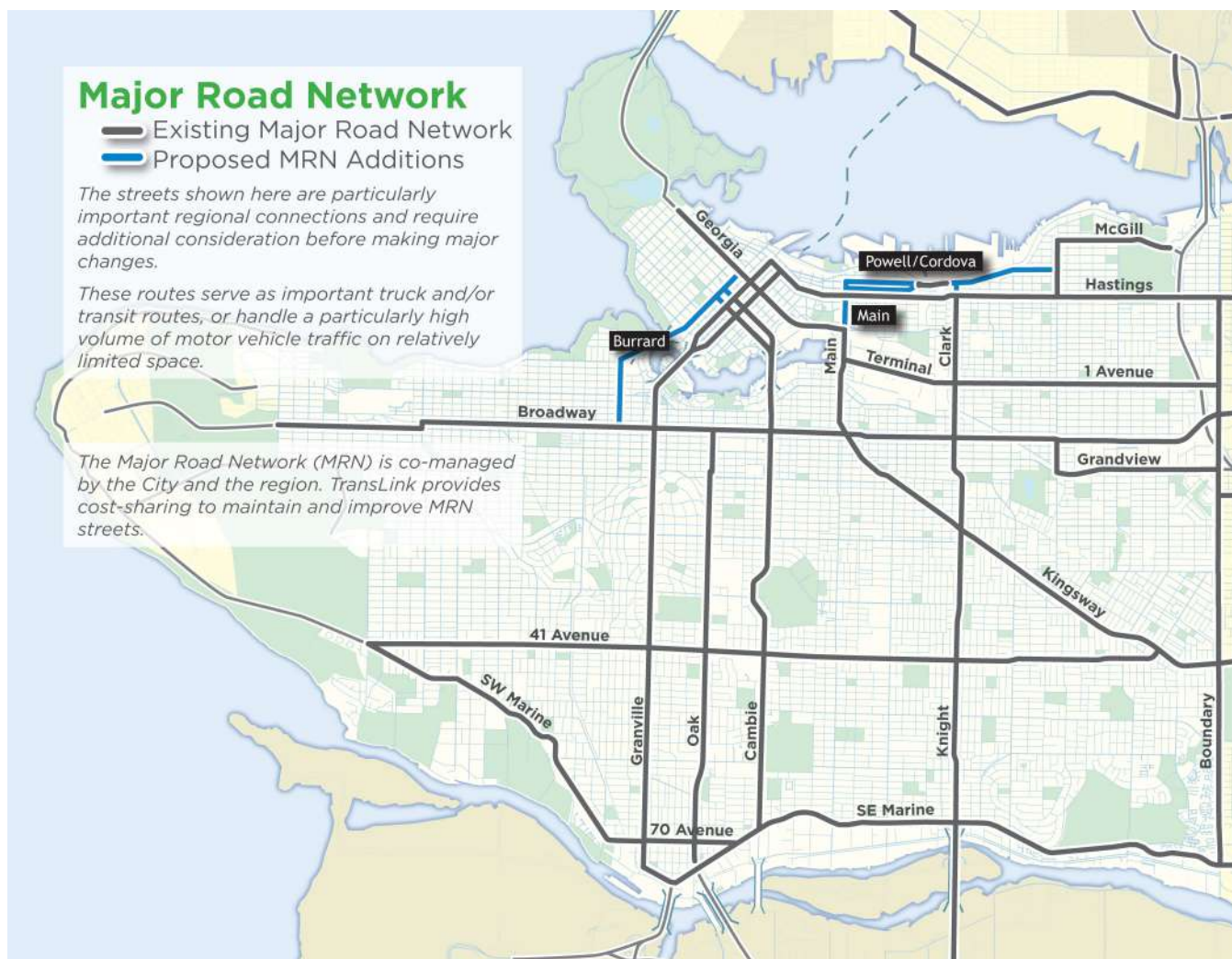
### Next Steps

Transportation 2040 emphasizes the economic importance of the MRN in supporting national, regional and local goods movement, as well as critical transit corridors. The plan also identifies potential additions to the MRN to be discussed with TransLink and that support goods and transit movement within Vancouver. These are shown on the following map and include portions of:

- Burrard Street;
- Main Street; and
- Powell/Cordova Streets (to connect the planned Powell Street Overpass, already approved as part of the MRN).

Moving forward, the City will work with TransLink and other partners to ensure these routes continue to function effectively as key regional transportation corridors. An additional level of review will take place prior to making changes on these routes, to ensure they continue to function effectively for transit, goods movement, and motor vehicles, and that people-moving capacity is maintained or increased.





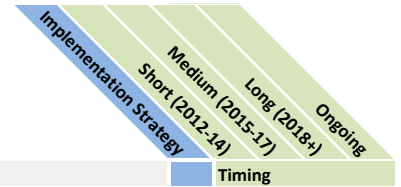
### Relevant Existing Policy, Directions, and Programs

- Powell Street Overpass (in development)
- Downtown Transportation Plan (2002)
- Major Road Network Co-Management Principles (1999)
- Transportation Plan (1997)

### Relevant Transportation 2040 Directions

- T 5.2. Maintain transit streets to a high standard
- M 1.1. Optimize network operations to manage congestion impacts
- M 1.2. Consider impacts to transit, commercial vehicles, and general traffic flow prior to reallocating road space
- M 1.3. Manage traffic to improve safety and neighbourhood livability
- G 1.1. Protect and improve rail corridors for goods and passenger movement
- G 1.2. Support truck movement on key regional routes
- G 2.1. Maintain an efficient network of designated truck routes

## **APPENDIX: SUMMARY OF DIRECTIONS**



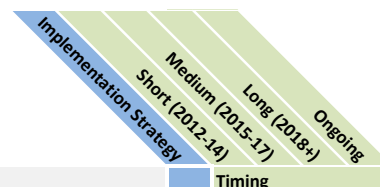
Number	Policy or Action	Timing
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## L LAND USE

### L 1 LAND USE DIRECTIONS

L 1.1	Prioritize and encourage a dense and diverse mix of services, amenities, jobs, and housing types in areas well-served by frequent, high-capacity transit.					
L 1.2	Locate major trip generators near rapid transit stations or along transit corridors.					
L 1.3	Design buildings to contribute to a public realm that feels interesting and safe.					

## Transportation 2040



Number Policy or Action

Timing

## W WALKING

## W 1 PEDESTRIAN NETWORK

## W 1.1 Make streets safer for walking

W 1.1.1	Address pedestrian safety "hot spots," starting by implementing recommendations from the 2012 Pedestrian Safety Study and through future safety assessments as needed.					
W 1.1.2	Implement pedestrian-oriented designs as streets are rebuilt and infrastructure is replaced to improve safety for all modes of travel. (Consider more rapid implementation for measures that demonstrate significant safety gains.) Specific measures include:					
a)	minimizing crossing distances and curb radii, while considering needs of other road users;					
b)	installing countdown timers and reviewing signal timing to ensure adequate crossing time for people with limited mobility;					
c)	maximizing visibility at crosswalks through appropriate lighting, high-visibility pavement markings, and clear sight lines;					
d)	implementing raised sidewalks or other treatments to prioritize safe walking across lanes, driveways, and some local streets; and					
e)	reducing vehicle speeds through traffic calming measures as appropriate.					
W 1.1.3	Implement signal measures to prioritize pedestrian movement and safety across intersections, considering measures such as increased time to cross, leading pedestrian intervals, eliminating right turns on red lights, minimizing the requirements to push buttons, and scramble intersections.					
W 1.1.4	Implement an ongoing spot improvement program to address emerging issues of safety and comfort related to walking, such as installing pedestrian-scale lighting along priority walking streets.					
W 1.1.5	Consider ways to improve lane environments for people on foot while maintaining essential functions such as loading, parking, fire access, and services, particularly in locations where:					
a)	the lane is the shortest path between key walking destinations; and					
b)	and the lane serves as a primary residential and/or business access point.					
W 1.1.7	Minimize the width and number of new driveways that cross sidewalks and other walking paths.					

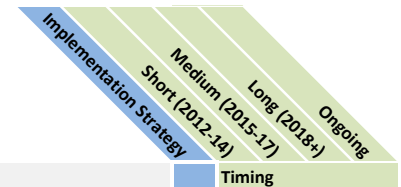
## W 1.2 Provide generous, unobstructed sidewalks on all streets

W 1.2.1	Develop minimum and desired pedestrian guidelines for different types of street, outlining sidewalk clear zone widths, accessibility features, surface treatments, and furniture placement.					
W 1.2.2	Review and enforce bylaws to ensure sidewalk clear zones remain free of obstructions					
W 1.2.3	Identify, prioritize, and address locations with insufficient sidewalk width by: a) removing or relocating obstacles, b) reallocating road space, c) requiring setbacks in new developments.					

## W 1.3 Make streets accessible for all people

W 1.3.1	Continue to install or replace missing or deficient curb ramps; develop criteria for prioritizing implementation.					
W 1.3.2	Continue to install accessible pedestrian signals citywide through ongoing replacement programs, at locations prioritized in consultation with representatives of the visually-impaired community.					
W 1.3.3	Continue to maintain and rehabilitate sidewalks and pathways so they are free of trip hazards and debris; use smooth materials and designs that are comfortable for users of strollers, wheelchairs, or other mobility aids.					
W 1.3.4	Improve and enforce measures to maintain accessibility around construction zones and special events, for example by requiring contractors to establish temporary paths where necessary, and by implementing an escalating fine structure for contractors who repeatedly break related city bylaws.					
W 1.3.5	Provide accessible public restrooms in high-demand locations, through measures including:					
a)	encouraging TransLink to provide public restrooms at all transit stations;					
b)	monitoring the performance of existing automated public toilets (APTs), and installing and maintaining additional APTs if successful;					
c)	maintaining or extending hours for City-owned facilities at parks, libraries, community centres, and other locations;					
d)	working with private partners to make their restrooms available for public use; and					
e)	identifying restroom locations through wayfinding maps and online tools.					
W 1.3.6	Maintain and update universal accessibility guidelines to help guide urban design and street reconstruction.					
W 1.3.7	Provide opportunities for rest at regular intervals by increasing the amount of seating available on and along sidewalks and other pedestrian paths.					

## Transportation 2040



Number	Policy or Action	Timing				
<b>W 1.4 Make streets and public spaces rain-friendly</b>						
W 1.4.1	Review and expand weather protection guidelines to encourage or require appropriately wide, continuous, well-designed awnings or canopies for all development in commercial areas throughout the city.					
W 1.4.2	Include strategies to reduce ponding in street maintenance guidelines. Prioritize maintenance at locations with more walking and street activity.					
W 1.4.3	Incorporate rain-friendly design features into public spaces.					
<b>W 1.5 Address gaps in the pedestrian network</b>						
W 1.5.1	Improve pedestrian connectivity and accessibility by addressing gaps and deficiencies in the network. High priority locations include:					
a)	False Creek Bridges;					
b)	False Creek Flats / Northeast False Creek;					
c)	transit stations with poor connectivity; and					
d)	major streets with long blocks and/or limited crossing opportunities.					
W 1.5.2	Review crosswalks that are currently closed for pedestrians, and consider opening them wherever feasible and safe.					
W 1.5.3	Develop a strategy to prioritize and address missing or deficient sidewalks.					
W 1.5.4	Work with public and private property owners to assess and improve pedestrian connectivity, particularly within new developments and where the grid is less connected.					
<b>W 1.6 Provide a blueprint for great pedestrian realm design</b>						
W 1.6.1	Advance street typologies and guidelines for the pedestrian realm to guide new developments, street and sidewalk restoration, and other improvements. Street types will reflect transportation function and land use context, as well as other local features or special attributes. Guidelines should support multiple objectives including safety and comfort, accessibility, connectivity, public life, local commerce, ease of maintenance, and ecological sustainability.					
W 1.6.2	Explore opportunities to improve local ecology when designing and (re)building streets and other rights-of-way, for example by improving wildlife habitat and stormwater management, restoring native flora, increasing the number, size, and health of street trees, and daylighting lost streams.					
<b>W 1.7 Make the city easy to navigate on foot</b>						
W 1.7.1	Expand and maintain a pedestrian wayfinding system that is consistent, legible, and user-friendly. Provide data in an open format to support third-party mobile application development.					

## W 2 PUBLIC SPACES

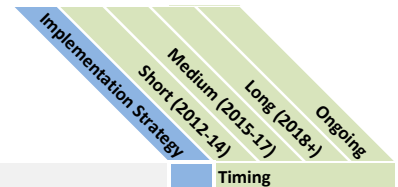
## W 2.1 Enable and encourage creative uses of the street

W 2.1.1	Expand special event and public space programs (such as VIVA Vancouver) to enable and encourage creative street uses, for example through pilots, competitions, and funding partnerships.	■	■	■	■	■
W 2.1.2	Streamline processes to make it easier to hold temporary and recurring events in public rights-of-way, including development of standard traffic management and transit rerouting plans for commonly used areas.	■	■	■	■	■

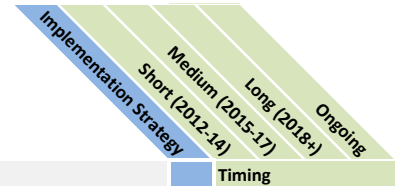
## W 2.2 Create public plazas and gathering spaces throughout the city

W 2.2.1	Create pedestrian-priority streets and spaces, considering needs for cycling, transit, services, and deliveries to determine appropriate design treatments. Potential locations (subject to additional consultation) include:	■	■	■	■	■
a)	800-block Robson Street (Robson Square);	■	■	■	■	■
b)	portions of Robson and/or Granville Streets;	■	■	■	■	■
c)	Hamilton and/or Mainland streets between Nelson and Davie; and	■	■	■	■	■
d)	other locations as identified through future planning processes.	■	■	■	■	■
W 2.2.2	Implement a permit-based 'Parklet' program to transform on-street parking spaces into mini-plazas or sidewalk extensions.	■	■	■	■	■
W 2.2.3	Implement a City-led 'Pavement-to-Plazas' program to create low-cost, high-impact public spaces by transforming underused street rights-of-way.	■	■	■	■	■
W 2.2.4	Use traffic calming measures as opportunities to create mini-plazas or parklets.	■	■	■	■	■

## Transportation 2040



Number	Policy or Action	Timing					
<b>C CYCLING</b>							
<b>C 1 CYCLING NETWORK</b>							
<b>C 1.1 Build cycling routes that feel comfortable for people of all ages and abilities</b>							
C 1.1.1	Adopt and implement planning and design guidelines to support a network of routes that feel comfortable for people of all ages and abilities (Class AAA), including design treatments and interventions for:						
a)	providing physically separated bicycle facilities on busy streets where motor vehicles or speeds will remain high;						
b)	managing and reducing motor vehicle traffic volumes and speeds on neighbourhood routes through traffic diversion and other calming measures;						
c)	providing sufficient operating space for bicycle traffic through parking management and other measures;						
d)	designing safe intersections and crossings with improved visibility and managed conflicts (for example, through turn restrictions and signal priority);						
e)	reallocating road space from general traffic and/or motor vehicle parking where appropriate;						
f)	accommodating unconventional bikes and other forms of active transportation, such as cargo bikes, delivery tricycles, in-line skates, and skateboards;						
g)	highlighting potential conflict zones with pavement markings; and						
h)	prioritizing cyclist movements on key routes using tools such as reorienting stop signs and synchronizing traffic signals at the prevailing speed of bicycle traffic.						
C 1.1.2	Develop a cycling comfort index to help identify routes that do not meet design guidelines for people of all ages and abilities (Class AAA), and to inform design approaches for new routes and route upgrades.						
C 1.1.3	Minimize the width and number of new driveways that intersect bike routes.						
C 1.1.4	Conduct regular surveys to evaluate user comfort and perceived safety on cycling facilities.						
<b>C 1.2 Upgrade and expand the cycling network to efficiently connect people to destinations</b>							
C 1.2.1	Review the existing cycling network to identify missing routes, gaps and deficiencies, with a focus on facilities that feel comfortable for people of all ages and abilities.						
C 1.2.2	Develop, regularly update, and implement short-term (approximately 5-year) network improvement strategies to address gaps and deficiencies in the network, in consultation with residents, businesses, and other stakeholders:						
a)	using route spacing guidelines for different areas of the city, with closer spacing in the Metro Core and areas with high cycling potential;						
b)	upgrading key existing routes with high existing or potential ridership;						
c)	prioritizing critical gaps in the network and connections to key destinations, including schools, community centres, major transit stations, and commercial high streets; and						
d)	favouring simple and direct connections with few deviations to establish an easily understood and memorable network of routes, while also considering the importance of topography in route choice.						
C 1.2.3	Undertake a cycling safety study to identify cycling safety “hotspots” with a high number of collisions.						
C 1.2.4	Implement an ongoing spot improvement program for existing bicycle routes to address safety “hotspots” as well as emerging safety, comfort, and bicycle capacity issues, and to fill gaps in the network.						
C 1.2.5	Incorporate separated bicycle facilities into the design and construction of all new major roads.						
C 1.2.6	Consider cycling improvements as part of all street capital projects, installing and upgrading routes as opportunities arise through construction and rehabilitation projects.						
C 1.2.7	Work with adjacent municipalities and other partners to improve cycling connections across municipal boundaries.						
<b>C 1.3 Maintain bikeways in a state of good repair</b>							
C 1.3.1	Develop and implement maintenance and cleaning guidelines for bike routes, prioritizing routes with high ridership.						
C 1.3.2	Improve and enforce measures to maintain comfortable cycling access around construction zones and special events, for example by requiring contractors to establish temporary bicycle lanes, and by implementing an escalating fine structure for contractors who repeatedly break related city bylaws.						
C 1.3.3	Support the development of a mobile application that makes it easier to make maintenance requests.						
<b>C 1.4 Make the cycling network easy to navigate</b>							
C 1.4.1	Develop and implement a consistent, legible wayfinding system on all bicycle routes and greenways. Coordinate with other wayfinding efforts and work with TransLink and neighbouring municipalities to encourage a common approach across modes and local boundaries.						
C 1.4.2	Produce and regularly update a citywide cycling map, including a digital version. Provide route information in an open format to support third-party mobile application development.						



Number	Policy or Action	Timing
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## C 2 PARKING & END-OF-TRIP FACILITIES

### C 2.1 Provide abundant and convenient bicycle parking and end-of-trip facilities

C 2.1.1	Periodically review policies for new developments to ensure abundant and conveniently located secure bicycle parking and end-of-trip facilities. Minimum requirements should support long-term mode share targets and ownership levels, and include convenient parking for visitors.					
C 2.1.2	Develop a retrofit program to make it easier to add bicycle parking and other end-of-trip facilities to existing buildings.					
C 2.1.3	Provide higher-security bicycle parking:					
a)	prioritizing major transit stations and other high-demand locations;					
b)	piloting at least one downtown bike centre that includes additional maintenance and end-of-trip facilities;					
c)	providing convenient pay-as-you-go bicycle lockers in high-turnover areas; and					
d)	converting some motor vehicle parking at City-owned parking lots.					
C 2.1.4	Implement a strategy to provide abundant bicycle parking on streets and sidewalks while ensuring sufficient space for pedestrian movement, with components including:					
a)	guidelines for bike rack design and placement;					
b)	an on-street bike corral program;					
c)	a prioritization approach for commercial, residential, and other areas; and					
d)	an easy way for the public to submit requests for additional bicycle parking.					
C 2.1.5	Provide abundant, covered, and conveniently located bicycle parking at:					
a)	libraries, community centres, and other civic facilities; and					
b)	schools (in partnership with the school boards).					
C 2.1.6	Develop policy to ensure sufficient bicycle parking at corporate-sponsored and community events, for example through valet parking.					
C 2.1.7	Pilot a publicly available bike maintenance station on a high-volume bicycle route.					

## C 3 MULTI-MODAL INTEGRATION

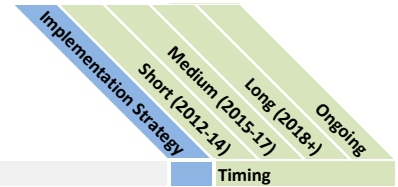
### C 3.1 Make it easy to combine cycling with other forms of transportation

C 3.1.1	Provide safe, convenient, and legible connections between major transit stations and the bicycle network.					
C 3.1.2	Work with TransLink to plan and implement abundant, secure, weather-protected bicycle parking at transit stations.					
C 3.1.3	Support measures to expand on-board carrying capacity of bicycles on public transit vehicles.					
C 3.1.4	Work with taxi industry to facilitate on-board carrying capacity of bicycles on taxis.					
C 3.1.5	Advocate for broader measures to accommodate bicycle circulation in new transit stations and station upgrades.					

### C 3.2 Provide a public bicycle system

C 3.2.1	Develop and implement a public bicycle system in the Metro Core and other areas with high cycling potential.					
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Number	Policy or Action	Timing
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## T TRANSIT

### T 1 TRANSIT NETWORK

#### T 1.1 Advance new and improved rapid transit

T 1.1.1	Work with partners to deliver an underground Millennium Line extension serving the Broadway Corridor as a top regional priority.					
T 1.1.2	Support SkyTrain station upgrades and other measures to increase system capacity, frequency, accessibility, and span of service.					
T 1.1.3	Collaborate with TransLink to provide fast, frequent, high-capacity, and fully accessible transit service on high-demand corridors including Broadway, Hastings, 41st/49th Avenue, Commercial/Victoria, and Main/Fraser.					
T 1.1.4	Protect and design for future high-capacity rapid transit corridors and potential station locations.					
T 1.1.5	Support regional transit projects outside city boundaries that demonstrate a strong business case.					

#### T 1.2 Advance new and improved local transit

T 1.2.1	Work with TransLink and the Province to improve the frequency, capacity, reliability, and service span of local transit, prioritizing high-demand corridors.					
T 1.2.2	Explore wider and consistent stop spacing on local routes to attract more riders and provide faster and more frequent service, while balancing the need for local access.					
T 1.2.3	Support new or adjusted services to address transit network gaps.					
T 1.2.4	Support strategic expansion of the trolley network, including extensions as well as mid-route turnaround facilities on busy routes to improve reliability and service flexibility.					
T 1.2.5	Advance a Downtown-False Creek-Arbutus streetcar service, through measures including:					
a)	protecting rights-of-way and designing streets to accommodate the service; and					
b)	working with TransLink on a business case.					

#### T 1.3 Improve transit reliability and speed using transit priority measures

T 1.3.1	Develop and implement transit priority measures in partnership with TransLink by:					
a)	reviewing transit reliability for different routes, identifying where and why delays are occurring;					
b)	developing guidelines regarding the application of potential transit priority measures; and					
c)	supporting and strategically implementing priority measures.					
T 1.3.2	Engage with neighbouring municipalities to ensure that transit quality improvements continue outside city limits.					

#### T 1.4 Support increased water-based transit

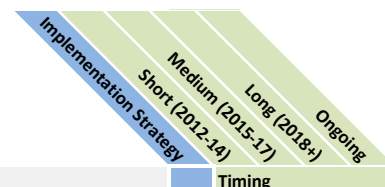
T 1.4.1	Replace or upgrade existing False Creek public docks to improve accessibility, and provide new docks as opportunities arise.					
T 1.4.2	Support the integration of private ferries in False Creek with public transit (for example, Compass Card integration, transit stop locations) and active transportation.					
T 1.4.3	Support new passenger ferry services on False Creek, Burrard Inlet, and/or the Fraser River where a strong business case can be made.					

#### T 1.5 Support improved inter-regional transit

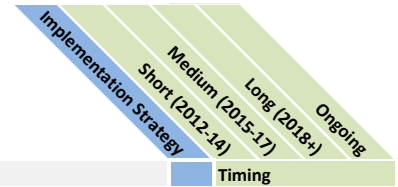
T 1.5.1	Work with TransLink as well as other government and private agencies to improve inter-regional transit services, including heavy passenger rail, ferry, coach, and air.					
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## Transportation 2040



Number	Policy or Action	Timing				
<b>T 2 TRANSIT-SUPPORTIVE PUBLIC REALM</b>						
<b>T 2.1 Support a transit system that is easy to navigate</b>						
T 2.1.1	Continue to work with TransLink to deliver consistent and legible wayfinding at and around all rapid transit stations and major transit interchanges.					
T 2.1.2	Work with TransLink to support the provision of real-time information at transit stops, and to provide data in an open format to support third-party mobile application development.					
<b>T 2.2 Provide easy connections and comfortable waiting areas throughout the network</b>						
T 2.2.1	Ensure transit interchanges are designed to facilitate easy and legible connections for people of all ages and abilities, including those with bicycles or mobility aids.					
T 2.2.2	Explore opportunities to improve transit connections at major stations through redevelopment.					
T 2.2.3	Provide safe and comfortable waiting areas at all bus stops where sufficient sidewalk and boulevard space exists. In locations where sidewalk space is too limited for a full shelter, pursue opportunities to locate amenities on private property.					
<b>T 3 INTEGRATION WITH OTHER MODES</b>						
<b>T 4 ACCESSIBILITY</b>						
<b>T 4.1 Support a universally accessible transit system with a goal of equal transit outcomes for people of all incomes, ages, and abilities</b>						
T 4.1.1	Provide accessible waiting and boarding areas at all transit stops, prioritizing improvements at high-demand locations and stops with higher usage by persons with disabilities.					
T 4.1.2	Ensure transit stations are designed to facilitate movement for persons with bicycles and mobility aids, for example through clear signage, stairway runnels, accessible fare gates, and large elevators with direct, simple, and quick paths to platforms and parking.					
T 4.1.3	Support alternative delivery mechanisms for paratransit services— including potential increased use of taxis—to lower per-ride costs, improve reliability, and reduce booking times.					
T 4.1.4	Require taxi driver education, training, and testing to ensure safe and sensitive service for customers with disabilities.					
<b>T 5 NEIGHBOURHOOD IMPACTS</b>						
<b>T 5.1 Reduce transit-related environmental and noise emissions</b>						
T 5.1.1	Support specifications for new transit vehicles that reduce noise, vibration and localized emissions.					
T 5.1.2	Support an expanded trolley network.					
<b>T 5.2 Maintain transit streets to a high standard</b>						
T 5.2.1	Continue to prioritize maintenance on high-volume bus corridors, and install concrete pads at bus stops to prevent rutting in the pavement.					
T 5.2.2	Consider high-volume bus routes when reviewing potential additions to the Major Road Network (MRN).					
<b>T 6 TRANSIT FINANCING</b>						
<b>T 6.1 Support stable and equitable long-term transit funding sources</b>						
T 6.1.1	Continue working with funding partners to expand stable, equitable funding sources to meet transit demand and achieve ridership goals. Potential sources include (but are not limited to):					
a)	increased fuel taxes;					
b)	a regional carbon tax;					
c)	vehicle registration fees; and					
d)	regional road pricing.					
T 6.1.2	Explore how development can be used to help pay for rapid transit projects, while recognizing the need for other public amenities that are also required with increased densities.					
<b>T 6.2 Support effective fares that encourage transit use</b>						
T 6.2.1	Support fare structures that encourage sustainable transportation behaviour and are simple for the customer to understand, with measures in place to ensure everyone can access the system.					
T 6.2.2	Support fare options that encourage transit use by families and visitors.					
T 6.2.3	Encourage bundling of transit fares into the ticket cost of major events.					
T 6.2.4	Support integrating the Compass Card system with other forms of transportation, including bike- and carsharing, parking payment, private ferrv services, and taxis.					



Number	Policy or Action	Timing
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## M MOTOR VEHICLES

### M 1 ROAD NETWORK

#### M 1.1 Optimize network operations to manage congestion impacts

M 1.1.1	Continue to optimize network operations such as signal timings and rush-hour parking regulations to manage congestion while supporting other plan goals.					
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#### M 1.2 Consider impacts to transit, commercial vehicles, and general traffic flow prior to reallocating road space

M 1.2.1	Monitor vehicle volumes to understand traffic trends and potential spare capacity. Where improvements to the walking and/or cycling environments are needed but the ability to reallocate road space is limited, consider alternative approaches such as property acquisition or building setbacks.					
M 1.2.2	Work with TransLink to secure strategic additions to the regional Major Road Network (MRN) such as (but not limited to): Burrard Street from Broadway to Georgia Street; Powell Street (and Cordova) between Main Street and Nanaimo Street; and any changes related to the Georgia and Dunsmuir Viaducts.					

#### M 1.3 Manage traffic to improve safety and neighbourhood livability

M 1.3.1	Continue to implement strategic traffic calming on local streets to improve safety and neighbourhood livability by:					
a)	prioritizing measures around neighbourhood bike routes, schools and other key pedestrian generators;					
b)	considering a street's function in the broader transportation network when determining the degree and type of traffic calming;					
c)	considering neighbourhood access issues prior to implementing diversion measures on local streets with high traffic volumes (>2500 vehicles per day); and					
d)	ensuring neighbourhood access for emergency responders.					
M 1.3.2	Refine the traffic calming evaluation process to encourage broad resident discussion and support prior to request submission.					
M 1.3.3	Explore opportunities to normalize bridge ramps and arterial intersections that have highway-style loops, odd angles, slip lanes, or other features that create a hostile pedestrian environment.					
M 1.3.4	Work with other jurisdictions to implement neighbourhood-friendly designs on bridges and roads that connect to the city. Ensure that upgrades and replacement infrastructure do not increase capacity for general motor vehicle traffic.					
M 1.3.5	Continue to monitor collision rates across the city, and address locations with a high number of incidents.					

### M 2 PARKING

#### M 2.1 Use off-street parking requirements to support reduced auto ownership and use

M 2.1.1	Develop and implement a strategy to: (a) eliminate minimum parking requirements downtown, near rapid transit stations, and for guaranteed rental residential developments, and (b) revise minimum requirements elsewhere based on target mode shares.					
M 2.1.2	Introduce parking maximum allowances throughout the city based upon current ownership levels or existing mode share.					

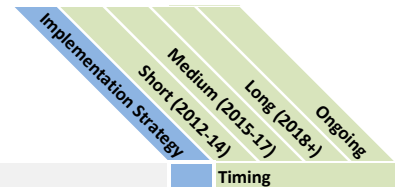
#### M 2.2 Support strategies that reduce the need for parking

M 2.2.1	Clarify the parking bylaw to reflect broader City transportation objectives, and to actively encourage strategies that reduce parking demand.					
M 2.2.2	Require demand management plans in all rezonings, multi-family, office, and mixed-use developments. Encourage demand management strategies in all other developments, and allow staff to reduce minimum parking requirements in response.					
M 2.2.3	Monitor the impacts of demand management plans, and use the results to improve effectiveness and revise policies as appropriate.					
M 2.2.4	Create a developer-friendly, Council-endorsed toolkit to assist developers and staff in developing transportation management strategies for new development.					

#### M 2.3 Separate parking and housing costs to increase housing affordability

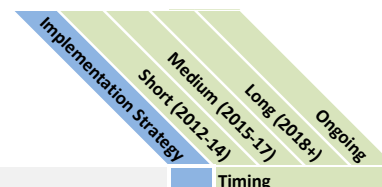
M 2.3.1	Continue to encourage the unbundling of parking costs from housing costs throughout the city, by offering a reduction from the minimum parking requirement, for example.					
M 2.3.2	Consider requiring unbundled parking costs as a condition of approval for multi-family, mixed-use, and rental developments in the downtown and near rapid transit stations.					

## Transportation 2040



Number	Policy or Action	Timing				
<b>M 2.4 Approach parking as a shared district resource</b>						
M 2.4.1	Develop and implement design guidelines for larger developments to enable non-occupant parking access (for example, mechanical parking, multiple levels of security).	■	■	■	■	■
M 2.4.2	Consider requiring parking in larger developments to be publicly accessible, to enable use as a shared resource.	■	■	■	■	■
M 2.4.3	Allow and encourage developers to lease parking spaces off-site instead of providing new spaces, to take advantage of nearby parking oversupply.	■	■	■	■	■
M 2.4.4	Develop a long-term strategy for Downtown parking, considering total parking supply, future demands, and other potential uses.	■	■	■	■	■
<b>M 2.5 Design parking to be flexible and adaptable</b>						
M 2.5.1	Modify codes and policy and encourage flexible design so that parking spaces can be converted to other uses (for example, living space, bicycle parking, or storage) in the future as demand changes.	■	■	■	■	■
M 2.5.2	Develop retrofit policies for existing buildings with excess parking to enable conversion to other uses.	■	■	■	■	■
M 2.5.3	Remove peak-period parking restrictions where possible to enable more flexible use of the curb lane, including:	■	■	■	■	■
a)	widening sidewalks at pinch points and other congested areas, as well as shortening crossings and improving visibility at intersections;	■	■	■	■	■
b)	creating space for street furniture such as bus stops or bike parking;	■	■	■	■	■
c)	creating opportunities for patios and parklets; and	■	■	■	■	■
d)	providing full-time curb parking to serve local businesses.	■	■	■	■	■
<b>M 2.6 Make it easier for drivers to find available parking spaces</b>						
M 2.6.1	Provide real-time availability information for City-owned off-street parking, through electronic signage and mobile device applications.	■	■	■	■	■
M 2.6.2	Manage curb space with variable or performance pricing strategies, ensuring on-street space availability and reducing traffic caused by drivers searching for available parking.	■	■	■	■	■
<b>M 2.7 Manage parking in neighbourhoods</b>						
M 2.7.1	Review, adjust and monitor the residential parking permit program to address parking spillover concerns associated with off-street reductions and to better reflect the high value of street space. Possible approaches include:	■	■	■	■	■
a)	gradually increasing permit costs to reflect market value;	■	■	■	■	■
b)	limiting the number of permits per household;	■	■	■	■	■
c)	increasing costs for each additional permit per household;	■	■	■	■	■
d)	capping the total number of permits and allowing residents to trade rights; and/or	■	■	■	■	■
e)	piloting a neighbourhood parking benefit district, where permit costs are increased and a portion of the revenue is directed towards local improvements such as sidewalks, lighting , and nearby amenities.	■	■	■	■	■
<b>M 2.8 Provide accessible parking for persons with disabilities</b>						
M 2.8.1	Continue to provide parking for persons with disabilities, through measures including:	■	■	■	■	■
a)	three-hour access to Residential Permit Parking and Resident Parking Only zones;	■	■	■	■	■
b)	thirty-minute access to Regular Loading, Passenger, and No Parking zones, for use while actively loading and unloading persons or materials; and	■	■	■	■	■
c)	provision of Disability Zones, implemented in locations based upon requests from people with disabilities.	■	■	■	■	■
<b>M 2.9 Support cycling, low-carbon vehicles, and car-sharing</b>						
<b>M 2.10 Support efficient loading and servicing</b>						
<b>M 3 CAR-SHARING</b>						
<b>M 3.1 Support increased car-sharing</b>						
M 3.1.1	Expand requirements and incentives for car-sharing in new developments.	■	■	■	■	■
M 3.1.2	Continue to make priority on-street locations available for car-sharing.	■	■	■	■	■
M 3.1.3	Adopt parking design guidelines for larger developments that enable non-residents to access on-site car-sharing vehicles.	■	■	■	■	■
M 3.1.4	Support legislative and technological advances that facilitate peer-to-peer car-sharing.	■	■	■	■	■

## Transportation 2040



Number	Policy or Action	Timing
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**M 4 OTHER DEMAND MANAGEMENT TOOLS****M 4.1 Support transportation demand programs that are employer-, institutional-, and district-based**

M 4.1.1	Support programs that help large employers, institutions, strata councils, and others develop strategies to reduce motor vehicle trips, and to encourage trips by walking, cycling, and transit.					
M 4.1.2	Demonstrate leadership by providing a transportation demand management program to all City employees and at civic facilities and by sharing strategies and results with others.					
M 4.1.3	Support a BIA-led pilot to enable small businesses to share resources in developing a district TDM program.					
M 4.1.4	Support programs such as TransLink's TravelSmart that provide personalized travel advice and support to residents, schools, and workplaces.					

**M 4.2 Support regional road or congestion pricing, with revenue directed towards sustainable transportation improvements**

M 4.2.1	Advocate for regional road pricing to reduce congestion and help fund transit and other sustainable transportation improvements. Contribute to the study and evaluation of alternatives.					
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**M 4.3 Support insurance options that reward drivers for driving less**

M 4.3.1	Support a pilot program for pay-as-you-drive or distance-based insurance premiums.					
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**M 5 LOW-CARBON VEHICLES****M 5.1 Provide charging infrastructure to support electric vehicles**

M 5.1.1	Continue to require all new developments to include electric vehicle charging infrastructure.					
M 5.1.2	Develop a retrofit policy to facilitate charging infrastructure in existing buildings.					
M 5.1.3	Partner with private industry to provide charging locations throughout the city, including retail locations, existing parking lots, and other under-utilized land.					

**M 5.2 Support early deployment of low-carbon and electric vehicles**

M 5.2.1	Support the adoption of low-carbon and electric vehicle technology for car-sharing vehicles.					
M 5.2.2	Convert the City's own fleet to electric, hybrid, or fuel cell vehicles as feasible.					
M 5.2.3	Create opportunities for low-carbon vehicles, including electric scooters, to park in the city.					

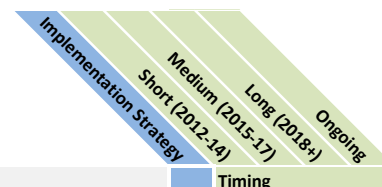
**M 6 TAXIS****M 6.1 Support improved taxi service**

M 6.1.1	Pilot and evaluate a program that allows taxis to travel in bus lanes.					
M 6.1.2	Continue to facilitate taxi loading and unloading at high-demand locations.					
M 6.1.3	Support incorporating taxis into TransLink's SmartCard system.					
M 6.1.4	Through the Vancouver Taxi Roundtable, continue working with partners to improve taxi services by:					
a)	exploring measures such as low-carbon vehicles, bike racks, fleet optimization, centralized dispatch systems, use of GPS and other technologies, ride sharing, and flat-rate fares for certain trips;					
b)	encouraging the Ministry of Transportation and Infrastructure and Passenger Transportation Board to implement innovative service improvements;					
c)	supporting the development of a Province-wide taxi service data collection and monitoring system; and					
d)	streamlining taxi regulations and developing a more comprehensive approach to regional service planning.					

**M 6.2 Support safe use of taxis for persons with disabilities**

M 6.2.1	Require taxi driver education, training, and testing to ensure safe and sensitive service for customers with disabilities.					
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## Transportation 2040



Number	Policy or Action	Timing
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## G GOODS, SERVICES AND EMERGENCY RESPONSE

### G 1 REGIONAL & BEYOND GOODS & SERVICES MOVEMENT

#### G 1.1 Protect and improve rail corridors for goods and passenger movement

G 1.1.1	Implement the False Creek Flats Rail Corridor Strategy, subject to refinement based on the Eastern Core Strategy and updated plan directions for walking, cycling, and neighbourhood circulation.					
G 1.1.2	Develop and implement long-term rail corridor strategies to increase capacity and reliability for False Creek Flats, the Grandview Cut, and the north shore of the Fraser River.					
G 1.1.3	Advocate for improvements to the regional rail network to address major bottlenecks such as the New Westminster Rail Bridge.					

#### G 1.2 Support truck movement on key regional routes

G 1.2.1	Advocate for the Port to re-open Clark Drive as the primary north-south access point for Port facilities, and to maintain McGill Avenue as the primary eastern access point.					
G 1.2.2	Continue to work with the Port, TransLink, and other partners to maintain efficient goods movement on MRN truck routes, and to plan for future growth.					

#### G 1.3 Support Port Metro Vancouver efforts to reduce port-related environmental and traffic impacts

G 1.3.1	Support Port Metro Vancouver initiatives that reduce environmental and traffic impacts.					
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#### G 1.4 Support Vancouver International Airport as British Columbia's primary air gateway

G 1.4.1	Support new and improved passenger connections between the Canada Line and the rest of the existing and planned regional rapid transit network.					
G 1.4.2	Consider airport needs on major transit and road network corridors connecting to the airport, including the Canada Line, Marine Drive, and Cambie, Oak, and Granville Streets.					

### G 2 LOCAL GOODS & SERVICES MOVEMENT

#### G 2.1 Maintain an efficient network of designated truck routes

G 2.1.1	Monitor the local truck network within the city and identify opportunities to improve reliability.					
G 2.1.2	Consider limited expansion of the truck network by designating additional streets as "limited use" routes for small and mid-sized trucks, in consultation with local residents, businesses, and the trucking industry.					

#### G 2.2 Provide for efficient loading and unloading

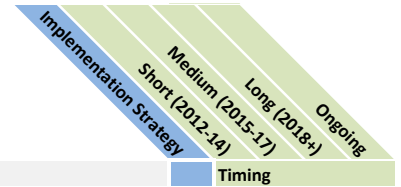
G 2.2.1	Review loading zone policies to ensure efficient and appropriate short-term use, and consider the following interventions as appropriate:					
a)	reviewing and revising eligibility criteria for commercial vehicle permits, prioritizing goods movement vehicles and couriers;					
b)	increasing enforcement;					
c)	introducing paid loading zones, with the potential for variable rate structures to promote turnover; and					
d)	providing additional loading zones where required.					
G 2.2.2	Revise parking requirements for new development to ensure sufficient off-street loading and parking spaces for smaller service and delivery vehicles.					
G 2.2.3	Ensure commercial laneways continue to support efficient goods movement.					
G 2.2.4	Review the benefits and implications of late night deliveries, as well as the bylaw and policy requirements for potential implementation of related strategies.					

#### G 2.3 Support low-impact goods and services movement and delivery

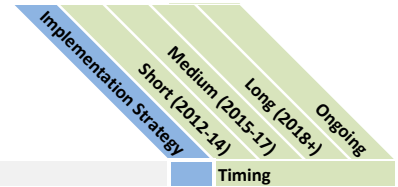
G 2.3.1	Support regulations, incentives, and other strategies to facilitate efficient low-impact goods and services movement, including consideration of:					
a)	"hub and spoke" delivery models incorporating urban freight consolidation centres;					
b)	flexible loading options for cycle-based and other small-scale vehicles; and					
c)	right-sizing of service and delivery vehicles.					
G 2.3.2	Continue to demonstrate corporate leadership in procurement and operations by using low-impact approaches for City-related services and deliveries.					
G 2.3.3	Explore opportunities to optimize services that occur in laneways, to reduce the footprint for waste and recycling collection.					

#### G 2.4 Support local production and distribution to reduce the need for large-scale transport

G 2.4.1	Continue supporting local production and distribution through measures including the preservation of industrial land, enabling small-scale manufacturing in some areas of the city, and supporting local urban agriculture.					
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Number	Policy or Action	Timing
<b>G 3 EMERGENCY RESPONSE</b>		
<b>G 3.1 Consider emergency vehicle access in street designs and traffic calming measures</b>		
G 3.1.1	Work with emergency responders when developing new traffic calming plans and designs.	Implementation Strategy, Short (2012-14), Medium (2015-17), Long (2018+), Ongoing
G 3.1.2	Work with emergency responders to designate primary emergency response routes where certain traffic calming measures will not be implemented.	Implementation Strategy, Short (2012-14), Medium (2015-17), Long (2018+), Ongoing
<b>G 3.2 Provide up-to-date, readily-accessible information on traffic calming measures and closures</b>		
G 3.2.1	Maintain and make available to emergency service providers an inventory of traffic calming measures, road closures, and other detours.	Implementation Strategy, Short (2012-14), Medium (2015-17), Long (2018+), Ongoing
	Provide information online and in an open format to support mobile application development.	Implementation Strategy, Short (2012-14), Medium (2015-17), Long (2018+), Ongoing



**Number** **Policy or Action**

**Timing**

## E ENCOURAGEMENT, EDUCATION & ENFORCEMENT

### E 1 ENCOURAGEMENT & PROMOTION

#### E 1.1 Promote walking and cycling as fun, practical, and healthy transportation choices

E 1.1.1	Develop and implement a program to promote walking and cycling as fun, practical, and healthy transportation choices, and a normal part of everyday life.					
E 1.1.2	Continue a 'safe routes to school' program that connects schools to their surrounding neighbourhood with high quality walking and cycling routes for at least one block, complemented by promotional strategies that encourage students to use active travel modes.					
E 1.1.3	Continue to support and streamline permitting processes for community events, festivals, and rides that encourage and celebrate active transportation.					
E 1.1.4	Develop recurring cyclovía-style event(s) that celebrate active transportation.					
E 1.1.5	Consider infrastructure that promotes and celebrates cycling, such as bicycle count displays and foot rests at intersection approaches.					

### E 2 EDUCATION

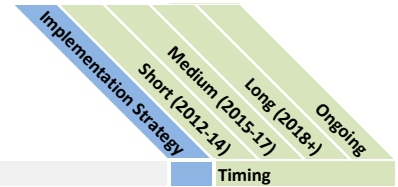
#### E 2.1 Support education and awareness programs to improve safety and reduce conflicts

E 2.1.1	Advocate for making walking safety awareness a key component of all driver training courses and examinations in British Columbia, including for commercial licenses.					
E 2.1.2	Educate all road users on the proper use of:					
a)	crosswalks (marked and unmarked);					
b)	lane crossings and driveways;					
c)	signals, including pedestrian and bicycle signal indications;					
d)	traffic calming measures;					
e)	bicycle boxes;					
f)	designated bicycle crossings; and					
g)	other facilities as new designs and treatments are introduced.					
E 2.1.3	Work with partners such as TransLink, the Vancouver Police Department (VPD), and ICBC to promote safe and respectful interaction among all road users, particularly as it relates to vulnerable road users.					

#### E 2.2 Support cycling skills training to improve cyclist safety and confidence

E 2.2.1	Develop and implement a long-term strategy to support cycling education and skills development, including identifying partners and potential resource allocations.					
E 2.2.2	Advocate for making cycling skills training a core part of the school curriculum or widely available to youth through other means.					
E 2.2.3	Develop cycling skills training facilities in key locations around the city.					





Number	Policy or Action	Timing				
<b>E 3   ENFORCEMENT &amp; LEGISLATION</b>						
<b>E 3.1   Support enforcement practices that protect vulnerable road users</b>						
E 3.1.1	Work with the VPD to enhance enforcement, education, and awareness approaches targeting behaviours that endanger vulnerable road users. Focus on preventing collisions by improving interactions between people riding, driving, and walking.					
E 3.1.2	Maintain and enforce 30 km/h speed limits on bike routes and greenways.					
E 3.1.3	Encourage further development of the VPD bicycle squad.					
<b>E 3.2   Support enforcement practices that can help to manage congestion impacts</b>						
E 3.2.1	Work with the VPD and bylaw enforcement to enhance enforcement, education, and awareness approaches targeting behaviours that contribute to congestion, such as blocking the intersection box, illegal turn maneuvers, and violation of no-stopping zones.					
<b>E 3.3   Support laws that protect vulnerable road users</b>						
E 3.3.1	Review and update City bylaws and advocate for changes to the BC Motor Vehicle Act that:					
a)	provide enhanced legal protection for vulnerable road users;					
b)	clarify definitions and proper use of cycling-specific facilities and traffic control devices;					
c)	address inconsistencies with established safe riding behaviour;					
d)	encourage more walking and cycling while considering safety for all road users; and					
e)	establish guidelines and regulations on the types of electric-assist and electric vehicles that can use active transportation facilities.					
E 3.3.2	Advocate for provincial legislative changes to enable municipal control over blanket speed limits for City streets.					
<b>E 3.4   Work to reduce bicycle theft</b>						
E 3.4.1	Participate in a regional bicycle theft task force to research, implement, and coordinate programs and enforcement practices that address bicycle theft, including development of a bicycle bait program.					